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No. ONE

OCTOBER, 1905

The
BUSINESS
MAGAZINE

The
MacLean Publishing Co., Limited
Montreal **Toronto** **Winnipeg**

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NOTE.

Owing to the confusion consequent upon the publication of this first number of THE BUSINESS MAGAZINE, under new management, a few mistakes have been made. In some copies the index will be found to be a little out from page 79 onward. Readers will kindly overlook this small error.

The Business Magazine

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Inside with the Publishers

OF

The Business Magazine

HEREWITH we present to the public the first number of our new magazine, which we have sub-designated The Home Magazine of the Busy Man and His Family. This first number will give our readers some idea of the scope of the publication. Taking it all round we consider this an excellent initial number.

Starting from it as our basis, we are going to modify and improve our plan month by month, and so by degrees advance towards our ideal. A steady improvement from one month to the next means a lot of hard and constant work, but we are determined to move ahead.

Our thanks are due to those patrons of the other publications of the MacLean Publishing Company who subscribed to The Business Magazine before it saw the light. The faith reposed by these early subscribers in our ability to produce a readable and valuable magazine is most gratifying. Their numbers were by no means small. In fact we were much surprised at the interest which was manifested and which evinced itself in the volume of subscriptions. Another pleasing feature was that so very few gave us refusals. In fact, up to the time of going to press only three refusals were received.

A letter similar to that reproduced on the opposite page gives some idea of the strong position we occupy as a publishing company in the esteem of the men and women of affairs in Canada. The writer but expresses in writing what many express in words and in thought.

To repeat what has been said before in connection with our plans for this Business Magazine, our aim is to give our subscribers all that is most readable and most instructive in the magazines of the world. What business man can hope for a moment by his own effort and at his own expense to keep in touch with even one-tenth of the magazines and reviews that appear from the press to-day! Yet here is his opportunity to get the very best at small expense. Our staff search the magazines for him. Our presses reproduce the selected articles, and in the Business Magazine he or she gets it all for the nominal sum of \$2.00 a year.

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MONTREAL TORONTO WINNIPEG

The Approbation of a Canadian Grocer

As an example of the esteem in which The MacLean Publishing Company is held among the tradesmen of Canada, let us reproduce the following most complimentary letter:

Port Hope, Ont.,

Sept. 29, 1905

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Dear Sirs,—

Enclosed find subscription form filled out for your new venture, "The Business Magazine."

I was almost your first subscriber to The Canadian Grocer, nearly 20 years ago, and have always profited by keeping in touch with each issue. I have no doubt but your new book will maintain the high standard of your other publications.

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THE BUSINESS MAGAZINE

Vol. XI.

OCTOBER, 1905.

No. 1.

The Orient Appraised.

BY HON. O. P. AUSTIN IN THE NATIONAL GEOGRAPHIC MAGAZINE.

This is a study in figures—figures that mystify by their very magnitude. In the main the writer attempts to show that it is by increasing transportation facilities that an undreamed of trade will spring up in the Orient. He explains what railways have done for Japan's trade, and appraises what they will do for trade in other parts of the East.

WITHOUT transportation there can be no commerce. As civilization has advanced, commerce developed, transportation cheapened, and the wants of man expanded, the importance of the commercial prize of the Orient has increased until its value has to-day reached the enormous sum of nearly 3,000 millions of dollars per annum.

In 1805 the world had not a single steamer upon the ocean, a single mile of railway on land, a single span of telegraph upon the continents, or a foot of cable beneath the ocean. In 1905 it has over 18,000 steam vessels, 500,000 miles of railway, and more than 1,000,000 miles of land telegraph, while the very continents are bound together and given instantaneous communication by more than 200,000 miles of ocean cables, and the number of telephone messages sent aggregate 6,000 millions annually, and one-half of them in the United States alone.

The effect of this enormous increase in the power of production, transportation, and communication has been to multiply commerce in all parts of the world. The world's international commerce, which a single century ago was less than two billions of dollars, is now 22 billions, and the commerce of the Orient, which was less than 200 million dollars, is now nearly 3,000 millions.

The population of Asia and Oceania is 850 millions, while that of all other parts of the world combined is but about 750 millions. Its land area is 18 million square miles, and that of all other parts of the world 84 millions; yet its commerce is slightly less than three billions of dol

lars, and that of other parts of the world 19 billions. This gives an average commerce in the entire Orient of about three dollars per capita per annum, while the average in all the rest of the world combined is 27 dollars per capita per annum. Thus the Orient, which has more than one-half of the world's population and more than one-third of its land area, has now but one-ninth as great as the average per capita in all other parts of the world combined. That section of the world which we are considering as the Orient, while it has more than one-half of the population and one-third of the land area of the world, has but about one-tenth of the world's railways and less than one-tenth of its telegraph lines. Can there be any doubt that this is at least one of the great causes of the fact that it has but one-eighth of the world's commerce? The people of the Orient are, as a rule, industrious, painstaking, and now disposed to commercial intercourse with the Occident, but without facilities for transporting their products from the interior to the seaboard, where they may sell or exchange them for products of the other parts of the world, they are powerless to develop a great commerce.

The three great countries of the Orient are China, India and Japan. They have about nine-tenths of the population of what is generally known as the Orient, and the relative development of commerce among these three great groups of Oriental people which are or are not supplied with railways should be at least suggestive as to the effect of railways upon commerce and commercial growth. Railway construction in India began about 1853, but did not make rapid development until more recent years. In Japan railway building began about 1872, but most of the development has occurred during the past decade. In China nearly all of the railway now existing has been constructed since 1900, and under circumstances which have not permitted its development as a system which would have material effect upon commerce. We may, then, fairly compare the growth of commerce in these three great Oriental countries, two of them with young but rapidly developing railway systems, the other with practically none.

The foreign commerce of China, with its 400,000,000 industrious people, but no railways, has grown but \$169,000,000 since 1870; that of India, with 300,000,000 people and a system of railways, has grown \$258,000,000, and that of Japan, with only 45,000,000 and a system of railways, has grown \$215,000,000. The Chinaman is known by those familiar with the conditions of the Orient as a natural trader and business man. A large share of the trade in the Orient is in the hands of the Chinese, and the positions of trust in the great banking establishments are largely held

by Chinamen, yet, despite these commercial characteristics of the Chinese, the foreign commerce of China, with no railway system, is about 85 cents per capita; that of India, with 28,000 miles of railway, is about \$2.25 per capita, and that of Japan, with 4,500 miles of railway, is \$5.87 per capita. In other words, the commerce of China, without a system of railways, is about one-third as much per capita as that of India, and one-sixth as much per capita as that of Japan, each of which has one mile of railway for each 10,000 inhabitants.

But there is another feature of this recent railway development in the East which must be considered as likely to prove of great importance in the future relations of the Orient with the Occident. China has 2,000 miles of railway, most of it connected with the great Trans-Siberian line, and several thousand miles more have been authorized or definitely proposed. French Indo-China, lying just at the south of China, has over 1,000 miles constructed and many new lines projected, while the Malayan Peninsula, still further at the south, has some 300 miles, Siam about 350 miles, and Burmah 1,500 miles. The French Indo-China system is to be connected with the railways of China by a line 230 miles long, now under construction, at a prospective cost of some twenty million dollars. The railway lines under construction or projected in China promise to extend to her southwest border, where a few hundred miles of railway would connect them with the systems of Burmah, which in turn will connect with that of India, about 28,000 miles in length.

From India the railway system again stretches westward into Persia, and the construction of but a few hundred miles would put this great system into communication with the 2,000 miles of road in Asiatic Turkey, which in turn connects with the railways of Southern Europe, while a comparatively short stretch of road at the north of India would also connect the Indian railway system of Europe with that of China at the north, and, now that the construction of a few short links would furnish another continuous line from China to Europe at the south, we may confidently expect that the traveler may, within a comparatively few years, make the entire circuit of Eurasia by rail, travelling comfortably from Paris through the countries of Northwestern Europe, Russia, and Siberia, into China, and thence southward through Indo-China, Burmah, India, Persia, Turkey, and the countries of Southern Europe to the place of starting. The development which would come to the commerce of Europe with the Orient through the operation of this great railway circuit of the Eurasian continent could but be of great importance.

While it is a fact that the Orient, with more than half of the world's

population and one-third of its land area, has now but one-tenth of its railways and telegraphs, and one-eighth of its commerce, we are not justified in considering its commercial prize as of little value, present or prospective. The total commerce of Asia and Oceania, which we may broadly consider under this title, is nearly \$3,000,000,000, about equally divided between imports and exports, and its percentage of growth, even with the limited railway facilities offered, has been quite as rapid in recent years as that of the more favored Occident. The commerce of India is four times as great as when its railway system was begun, and that of Japan is six times as great as at the beginning of the construction of its railways, and we may therefore expect that the development of the great railway systems now projected in China, Korea, Indo-China, Siam, Burma, Malayan Peninsula, the Dutch East Indies and the Philippines, with the additions planned for India, Japan, Siberia, and Australia, will enormously increase the commerce of that part of the world.

The imports of all the countries and islands of Asia and Oceania now amount to nearly as much as the total exports of the United States. At present we supply but about 8 per cent. of that great importation, and it needs but a moment of reflection to realize what an addition it would give to our foreign trade if we could treble or quadruple our shares in the growing imports of that great section.



Pigs is Pigs.

BY ELLIS PARKER BUTLER IN AMERICAN ILLUSTRATED MAGAZINE.

Every month the publishers of THE BUSINESS MAGAZINE will print what they consider the best short story dealing with the commercial world which has appeared in the current magazines. This month's selection is a rare good yarn, a care-culler, a laugh-inducer, a genuine old-time funny story of the Irish persuasion. It will cheer you up, so don't omit reading it.

MIKE FLANNERY, the Westcote agent of the Interurban Express Company, leaned over the counter of the express office and shook his fist. Mr. Morehouse, angry and red, stood on the other side of the counter, trembling with rage. The argument had been long and heated, and at last Mr. Morehouse had talked himself speechless. The cause of the trouble stood on the counter between the two men. It was a soap box across the top of which were nailed a number of strips, forming a rough but serviceable cage. In it two spotted gel sa-pigs were greedily eating lettuce leaves.

"Do as you like, then!" shouted Flannery, "pay for them an' take them, or don't pay for them and leave them be. Rules is rules, Mister Morehouse, an' Mike Flannery's not goin' to be called down fer breakin' of them."

"But, you everlasting stupid idiot!" shouted Mr. Morehouse, madly shaking a flimsy printed book beneath the agent's nose, "can't you read t'her.—In your own plain printed rates? 'Pets, domestic, Franklin to Westcote, f 1 properly boxed, twenty-five cents each.' He threw the book on the counter in disgust. "What more do you want? Aren't they pets? Aren't they domestic? Aren't they properly boxed? What?"

He turned and walked back and forth rapidly, frowning ferociously. Suddenly he turned to Flannery, and, forcing his voice to an artificial calmness, spoke slowly, but with intense sarcasm.

'Pets,' he said, 'P-e-t-s! Twenty-five cents each. There are two of them. One! Two! Two times twenty-five are fifty! Can you understand that? I offer you fifty cents.'

Flannery reached for the book. He ran his hand through the pages and stopped at page sixty-four.

'An' I don't take fifty cents,' he whispered in mockery. "Here's the rule for ut. 'When the agent be in any doubt regardin' which of two rates applies to a shipment, he shall charge the larger. The consign-er may file a claim for the overcharge.' In this case, Mister Morehouse, I be in doubt. Pets them animals may be, an' domestic they be, but pigs, I'm blame sure they do be, an' me rules says plain as the nose on

yer face, 'Pigs, Franklin to Westcote, thirty cents each.' An' Mister Morehouse, by me arithmetick knowledge two times thirty comes to sixty cents."

Mr. Morehouse shook his head savagely.

"Nonsense!" he shouted, "confounded nonsense, I tell you! Why, you poor ignorant foreigner, that rule means common pigs, domestic pigs, not guinea-pigs!"

Flannery was stubborn.

"Pigs is pigs," he declared, firmly. "Guinea-pigs, or dago pigs, or Irish pigs is all the same to the Interurban Express Company an' to Mike Flannery. Th' nationality of the pig creates no differentiality in the rate, Mister Morehouse! 'Twould be the same was they Dutch pigs or Booshun pigs. Mike Flannery," he added, "is here to tlad to tne exprias business an' not to hould conversation wid Dago pigs in sivilteen languages fer to discover be they Chinese or Tipperary by hirth an' nativity."

Mr. Morehouse hesitated. He bit his lip and then flung his arms wildly.

"Very well!" he shouted, "you shall hear of this! Your president shall hear of this! It is an outrage! I have offered you fifty cents. You refuse it! Keep the pigs until you are ready to take the fifty cents, but, by George, sir, if one hair of those pigs' heads is harmed I will have the law on you!"

He turned and stalked out, slamming the door. Flannery carefully lifted the soap box from the counter and placed it in a corner. He was not worried. He felt the peace that comes to a faithful servant who has done his duty and done it well.

Mr. Morehouse went home raging. His boy, who had been awaiting the guinea-pigs, knew better than to ask for them. He was a normal boy and therefore always had a guilty conscience when his father was angry. So the boy slipped quietly around the house. There is nothing so soothing to a guilty conscience as to be out of the path of the avenger.

Mr. Morehouse stormed into the house.

"Where's the ink?" he shouted at his wife as soon as his feet was across the door-sill.

Mrs. Morehouse jumped guiltily. She never used ink. She had not seen the ink, nor moved the ink, nor thought of the ink, but her husband's tone convicted her of the guilt of having borne and reared a boy, and she knew that whenever her husband wanted anything in a loud voice the boy had been at it.

"I'll find Sammy," she said, meekly.

When the ink was found Mr. Morehouse wrote rapidly, and he read the completed letter and smiled a triumphant smile.

"That will settle that crazy Irishman!" he exclaimed. "When they get that letter he will hunt another job, all right!"

A week later Mr. Morehouse received a long official envelope with the card of the Interurban Express Company in the upper left corner. He tore it open eagerly and drew out a sheet of paper. At the top it bore the number A6754. The letter was short. "Subject—Rate on guinea-pigs," it said, "Dr. Sir—We are in receipt of your letter regarding rate on guinea-pigs between Franklin and Westcote, addressed to the president of this company. All claims for overcharge should be addressed to the Claims Department."

Mr. Morehouse wrote to the Claims Department. He wrote six pages of choice sarcasm, vituperation and argument, and sent them to the Claims Department.

A few weeks later he received a reply from the Claims Department. Attached to it was his last letter.

"Dr. Sir," said the reply. "Your letter of the 16th inst., addressed to this Department, subject rate on guinea-pigs from Franklin to Westcote, rec'd. We have taken up the matter with our agent at Westcote, and his reply is attached herewith. He informs us that you refused to receive the consignment or to pay the charges. You have therefore no claim against this company, and your letter regarding the proper rate on the consignment should be addressed to our Tariff Department."

Mr. Morehouse wrote to the Tariff Department. He stated his case clearly, and gave his arguments in full, quoting a page or two from the encyclopedia to prove that guinea-pigs were not common pigs.

With the care that characterizes corporations when they are systematically conducted, Mr. Morehouse's letter was numbered, O. K'd, and started through the regular channels. Duplicate copies of the bill of lading, manifest, Flannery's receipt for the package and several other pertinent papers were placed to the letter, and they were passed to the head of the Tariff Department.

The head of the Tariff Department put his feet on his desk and yawned. He looked through the papers carelessly.

"Miss Kane," he said to his stenographer, "take this letter. 'Agent, Westcote, N.J. Please advise why consignment referred to in attached papers was refused domestic pet rates.'"

Miss Kane made a series of curves and angles on her note book and waited with pencil poised. The head of the department looked at the papers again.

"Hnh! guinea-pigs!" he said. "Probably starved to death by this time! Add this to that letter: 'Give condition of consignment at present.'" "

He tossed the papers on to the stenographer's desk, took his feet from his own desk and went out to lunch.

When Mike Flannery received the letter he scratched his head.

"Give pristin condition," he repeated, thoughtfully. "Now what do thim clerks be wantin' to know, I wonder! 'Pristin condition,' is ut? Thim pigs, praise St. Patrick, do be in good health, so far as I know, but I niver was no veterinary surgeon to Dago pigs. Mebbey thim clerks wants me to call in the pig docther an' have their pulses took. Wan thing I do know, howiver, which is they're glorious appetites for pigs of their soize. Ate? They'd ate the brass padlocks off a barn door! If the paddy pig, by the same taken, ate as hearty as these Dago pigs do, there'd be a famine in Ireland."

To assure himself that his report would be up to date, Flannery went to the rear of the office and looked into the cage. The pigs had been transferred to a larger box—a dry goods box.

"Wan—two—three—four—five—six—seven—eight!" he counted. "Stivin spotted an' wan all black. All well an' hearty an' all eatin' lolke ragin' hippopoty-musses." He went back to his desk and wrote.

"Mr. Morgan, Head of Tariff Department," he wrote. "Why do I say Dago pigs is pigs because they is pigs and will be til you say they ain't which is what the rule book says stop your jollyin' me you know it as well as I do. As to health they are well and hopin' you are the same. P. S. There are eight now the family increased all good eaters. P. S. I paid out so far two dollars for cabbage which they like shall I put in bill for same what?"

Morgan, head of the Tariff Department, when he received this letter, laughed. He read it again and became serious.

"By George!" he said. "Flannery is right. 'Pigs is pigs.' I'll have to get authority on this thing. Meanwhile, Miss Kane, take this letter: 'Agent, Westcott, N.J. Regarding shipment guinea-pigs. File No. A6754. Rule 83, General Instruction to Agents, clearly states that agents shall collect from consignee all costs of proreander, etc., etc., required for live stock while in transit or storage. You will proceed to collect same from consignee.'"

Flannery received this letter next morning, and when he read it he grinned.

"Proceed to collect," he said, softly. "How thim clerks do bolke to be talkin'! Me proceed to collect two dollars and twenty-five cents off

Misther Morehouse! I wonder do thim clerks know Misther Morehouse? I'll git it! Oh, yes! 'Misther Morehouse, two an' a quarter, please. 'Cert'nly, me dear frind Flannery. Delighted!' Not!"

Flannery drove the express wagon to Mr. Morehouse's door. Mr. Morehouse answered the bell.

"Ah, ha!" he cried as soon as he saw it was Flannery. "So you've come to your senses at last, have you? I thought you would! Bring the box in."

"I hev no box," said Flannery, coldly. "I hev a bill again Misther John C. Morehouse for two dollars and twenty-five cents for kebbages aten by his Dago pigs. Wud you wish to pay ut?"

"Pay—Cabbage—?" gasped Mr. Morehouse. Do you mean to say that two little guinea-pigs—"

"Eight!" said Flannery. "Papa an' mamma an' the six chider. Eight!"

For answer Mr. Morehouse slammed the door in Flannery's face. Flannery looked at the door reproachfully.

"I take ut the con-sign-y don't want to pay for thim kebbages," he said. "If I know signs of refusal, the con-sign-y refuses to pay for wan dang kebbage leaf an' he lauged to me?"

Mr. Morgan, the head of the Tariff Department, consulted the president of the Interurban Express Company regarding guinea-pigs, as to whether they were pigs or not pigs. The president was inclined to treat the matter lightly.

"What is the rate on pigs and on pets?" he asked.

"Pigs thirty cents, pets twenty-five," said Morgan.

"Then of course guinea-pigs are pigs," said the president.

"Yes," agreed Morgan. "I look at it that way, too. A thing that can come under two rates is naturally due to be classed as the higher. But are guinea-pigs, pigs? Aren't they rabbits?"

"Come to think of it," said the president, "I believe they are more like rabbits. Sort of half-way station between pig and rabbit. I think the question is this—are guinea-pigs of the domestic pig family? I'll ask Professor Gordon. He is authority on such things. Leave the papers with me."

The president put the papers on his desk and wrote a letter to Professor Gordon. Unfortunately the Professor was in South America collecting zoological specimens, and the letter was forwarded to him by his wife. As the Professor was in the highest Andes, where no white man had ever penetrated, the letter was many months in reaching him. The president forgot the guinea-pigs, Morgan forgot them. Mr. Morehouse

forgot them, but Flannery did not. One-half of his time he gave to the duties of his agency; the other half was devoted to the guinea-pigs. Long before Professor Gordon received the president's letter Morgan received one from Flannery.

"About them Dago Pigs," it said, "what shall I do they are great in family life, no race suicide for them, they are thirty-two now shall I sell them do you take this express office for a menagerie, answer quick."

Morgan reached for a telegraph blank and wrote:

"Agent, Westcote. Don't sell pigs."

He then wrote Flannery a letter calling his attention to the fact that the pigs were not the property of the company, but were merely being held during a settlement of a dispute regarding rates. He advised Flannery to take the best possible care of them.

Flannery, letter in hand, looked at the pigs and sighed. The dry-goods box cage had become too small. He boarded up twenty feet of the rear of the express office to make a large and airy home for them, and went about his business. He worked with feverish intensity when out on his rounds, for the pigs required attention and took up most of his time. Some months later, in desperation, he asked a sheet of paper and wrote "100" across it and mailed it to Morgan. Morgan returned it, asking for explanation. Flannery replied:

"There be now one hundred sixty of them Dago pigs, for heavens sake let me sell off some, do you want me to go crazy, what?"

"Sell no pigs," Morgan wired.

Not long after this the president of the express company received a letter from Professor Gordon. It was a long and scholarly letter, but the point was that the guinea-pig was the *Cavia aparea* while the common pig was the genius *Sus* of the family *Suidae*. He remarked that they were prolific and multiplied rapidly.

"They are not pigs," said the president, decidedly, to Morgan. "The twenty-five cent rate applies."

Morgan made the proper notation on the papers that had accumulated in File A6754, and turned them over to the Audit Department. The Audit Department took some time to look the matter up, and after the usual delay wrote Flannery that he has had on hand one hundred and sixty guinea-pigs, the property of consignee, he should deliver them and collect charges at the rate of twenty-five cents each.

Flannery spent a day herding his charges through a narrow opening in their cases so that he might count them.

"Audit Dept." he wrote, when he had finished the count, "you are way off there may be was one hundred and sixty Dago pigs once, but

wake up don't be a hack number. I've got even eight hundred, now shall I collect for eight hundred or what, how about sixty-four dollars I paid out for cabbages."

It required a great many letters back and forth before the Audit Department was able to understand why the error had been made of billing one hundred and sixty instead of eight hundred, and still more time for it to get the meaning of the "cabbages."

Flannery was crowded into a few feet at the extreme front of the office. The pigs had all the rest of the room and two boys were employed constantly attending to them. The day after Flannery had counted the guinea-pigs there were eight more added to his drove, and by the time the Audit Department gave him authority to collect for eight hundred Flannery had given up all attempts to attend to the receipt or the delivery of goods. He was hastily building galleries around the express office, tier above tier. He had four thousand and sixty-four guinea-pigs to care for. More were arriving daily.

Immediately following his authorization the Audit Department sent another letter, but Flannery was too busy to open it. They wrote another and then they telegraphed:

"Error in guinea-pig bill. Collect for two guinea-pigs, fifty cents. I deliver all to consignee."

Flannery read the telegram and cheered up. He wrote out a bill as rapidly as his pencil could travel over paper and ran all the way to the Merchouse home. At the gate he stopped suddenly. The house stared at him with vacant eyes. The windows were bare of curtains and he could see into the empty rooms. A sign on the porch said, "To Let." Mr. Merchouse had moved! Flannery ran all the way back to the express office. Sixty-nine guinea pigs had been born during his absence. He ran out again and made feverish inquiries in the village. Mr. Merchouse had not only moved, but he had left Westcote. Flannery returned to the express office and found that two hundred and six guinea-pigs had entered the world since he left it. He wrote a telegram to the Audit Department.

"Can't collect fifty cents for two Dago pigs consignee has left town address unknown what shall I do? Flannery."

The telegram was handed to one of the clerks in the Audit Department, and as he read it he laughed.

"Flannery must be crazy. He ought to know that the thing to do is to return the consignment here," said the clerk. He telegraphed Flannery to send the pigs to the main office of the company at Franklin.

When Flannery received the telegram he set to work. The six boys he had engaged to help him also set to work. They worked with the

haste of desperate men, making cages out of soap boxes, cracker boxes, and all kinds of boxes, and as fast as the cages were completed they filled them with guinea-pigs and expressed them to Franklin. Day after day the cages of guinea-pigs flowed in a steady stream from Westcote to Franklin, and still Flannery and his six helpers ripped and nailed and packed—redentlessly and feverishly. At the end of the week they had shipped two hundred and eighty cases of guinea-pigs, and there were in the express office seven hundred and four more pigs than when they began packing them.

"Stop sending pigs. Warehouse full," came a telegram to Flannery. He stopped packing only long enough to wire back, "Can't stop," and kept on sending them. On the next train up from Franklin came one of the company's inspectors. He had instructions to stop the stream of guinea-pigs at all bar-ards. As his train drew up at Westcote station he saw a cattle car standing on the express company's siding. When he reached the express office he saw the express wagon hocked up to the door. Six boys were carrying bushel baskets full of guinea-pigs from the office and dumping them into the wagon. Inside the room Flannery, with his coat and vest off, was shoveling guinea-pigs into bushel baskets with a coal scoop. He was winding up the guinea-pig episode.

He looked up at the inspector with a snarl of anger.

"Wan wagonload more an' I'll be quit of him, an' never will ye catch Flannery wid no more foreign pigs on his hands. No, sur! They near was the death o' me. Nixt tyme I'll know that pigs of whittiver nationality is doustic pets—an' go at the lowest rate."

He began shoveling again rapidly, speaking quickly between breaths.

"Rules may be rules, but you can't fool Mike Flannery twice wid the same thrick—whin ut comes to live stock, dang the rules. So long as Flannery runs this expross office—pigs is pets—an' cows is pets—an' horses is pets—an' Bona an' tigers an' Rocky Mountain goats is pets—an' the rate on thim is twenty-folre cents."

He paused long enough to let one of the boys put an empty basket in the place of the one he had just filled. There were only a few guinea-pigs left. As he noted their limited number his natural habit of looking on the bright side returned.

"Well anyhow," he said, cheerfully, "his not so bad as ut might be. What if thim Dago pigs had been elephants!"

How We Are Being Poisoned.

BY ROBERT H. SHERARD IN LONDON MAGAZINE.

A terrible picture of the iniquities of food adulteration in England. The utter inadequacy of the Food and Drugs Act and the difficulties of securing convictions are explained. Especially does the writer direct attention to the adulteration of milk, and the terrible conditions existing in the meat trade. In comparison with England, the conditions in this country are far advanced in their legislation against these iniquities.

IN England, if you poison a man with metallic poisons, wilfully and from motives of greed, you get hanged; but, by going about your murder in another way, you may poison an unlimited number of people with metallic poisons, and grow rich and respected. Copper and arsenic have always been favorite poisons with murderers. They are so with the swindling tradesmen with whom we are dealing here. As to copper, here is what the British Trade Journal wrote some months ago about one of its principal uses in the wholesale poisoning of the public:

"The greening of preserved vegetables by addition of sulphate of copper can only be regarded as an abominable form of adulteration; and it is passing strange that in this year of grace it should still be necessary to endeavor to impress the fact, not only on the public generally, but upon the Government authorities and upon those who are concerned in the administration of the Food Acts, and in adjudicating under their provisions."

Of course it is not strange at all. This is an oligarchy. Our laws are made by politicians, not business men, and are administered largely by ignorammuses. Magistrates are constantly dismissing cases of copper and arsenic adulteration on the ground that the quantity in the sample under investigation is not sufficient in itself to be dangerous. I don't suppose the slow poisoner ever does give his victim "in one go" enough of his drug to kill him right off. Otherwise the chances of his detection would be much enhanced. His motto is "Slow and steady wins the race." And that is just the motto also of the adulterating tradesman.

The wiseacres on the magistrater's bench all over the country seem to ignore that most metallic poisons are accumulative; that the copper or the arsenic which your swindling tradesman rams down your throat to-day is going to join forces with the copper or the arsenic that got there yesterday and the day before, and every day for weeks and months past; that it is the last straw that breaks the camel's back; that it is the last milligramme of poison that kills, and that where metallic poisoning

in homoeopathic doses is tolerated the time must finally come when that accumulation of doses in your system is going to take its full effect on your health and on your life.

I have it on the authority of "The British Analytical Control" that nearly all preserved vegetables sold are "greened" with sulphate of copper. You get copper in all sorts of things. You get it in lemonade. You get it in brandy. You get it in claret. The other day a young Italian model in Paris told me that before posing for a living he had been employed as cellarman in a Parisian marchand de vin's shop, and that his employer used to put two pounds' worth of coppers out of the till into each barrel of wine to give it a particularly rich color, and to mask dilution.

Arise you get in such a variety of foods and in such quantities that it is no wonder that every man and woman of us has his hair or her tresses simply full of the poison, for it is by the hair that the poor body saturated with metallic poison tries to eliminate the stuff. Anything that is made from glucose contains arsenic—sweets, jams, honey, treacle, and so forth. In jams you get it in two forms, for besides the glucose there is the dye of the jam to be remembered.

Most aniline dyes contain arsenic. So you may get it in the pink coloring which your fishmonger sneers over your cut of stale salmon to give it the appearance of freshness. You get it in the silent spirit with which French brandy is "faked." And nearly all the cheaper brandy that is sold in English public-houses contains a percentage of silent spirit, and therefore contains arsenic. I have no doubt about it. I have seen the arsenic going into it.

The bulk of the spirit of which French brandy is composed is distilled out of beetroot. The beetroot is sliced up; and in order to get the juice out of the pulp as abundantly as possible, so many quarts of sulphuric acid are poured into each vat. I wish brandy-drinkers could see the filthy process by which their drink is obtained. The appearance of the beetroot juice before it has been completely distilled is so repulsive that it is known in the trade as "le flegme." Of course, it is refined and filtered before it goes off to the Charente district to be faked up as cognac. The filterings are sold for the manufacture of acid drops—"bombons anglais" they are called in France—and for soap.

The spirit which comes out of the still for the first ten minutes is known in the trade as "les mauvaises odeurs" (the bad smells), and this is sold for the manufacture of absinthe and other table liquors. You get "les mauvaises odeurs" in the fake Chartreuse which you sip with so much gusto. The refined "flegme" is sent off to Cognac, where it is

distilled, and where, with the addition of burnt sugar and certain esters or flavorings, it comes on the market as Cognac brandy, or "fine champagne" or "grand fine," according to the amount of water which has been added.

I once lived over a grocer's shop in St. Malo, and used to help my landlady, the grocery woman, to fix up her three qualities of brandy. For the "arsenic fine" I used to pour six buckets of water into the barrel; for the "cognac supérieur," twelve; and for the ordinary brandy I used a length of garden-hose. The spirit, as it reached her shop, used to be invoiced at 1s. 1s. 1½d., 1s. 2d., a quart. Of this the Government charges were tempest; the other 3d. represented the wholesale price of the stuff.

I do not say that this is the kind of brandy that you get in England, though you do come across it in the East End, where some aliena run illicit stills. Most of the French brandy and nearly all the English brandy sold in England contains a percentage of this spirit, mixed with grape-juice spirit, and faked with esters and coloring to hide the addition.

The only protection we have in England against the adulterating rascals is the Food and Drugs Act, amplified by the Margarine Act. When the Food and Drugs Act first came into force, it frightened the rogues into temporary honesty. I have very good proof of this in some figures which were given me by Mr. E. W. T. Jones, the Public Analyst for the County of Staffordshire. He was kind enough to look over his old reports, and this is the statement he made to me:

"The points I have noticed are that when adulteration was first attacked in 1873 the percentage of adulteration was 54 per cent.; in 1874 it was 47.6 per cent.; and in 1875 (when the first Food and Drugs Act, amended and amplified by further legislation in 1879 and 1890, came into force) it had dropped to 17.3 per cent."

In 1906 the percentage of adulterated samples detected by the public analyst all over the country was 7.9 per cent. This looks at first sight as if the Acts had had a wonderful effect in protecting the public. The truth is quite the reverse.

The Food and Drugs Act, which you can buy for three-halfpence, is the adulterator's handy *vade-mecum*. It teaches him how to swindle with impunity. It teaches him to avoid the corner forms of fraud and to be scientific in his roguery. He learns that it is risky to put sand in his sugar or water into his milk, but he learns also that where no legal standard exists he can sell anything he likes under a fraudulent name.

The machinery by which the Act is put into operation is deplorably defective. The sanitary inspectors, who are admirable public servants

are shockingly overworked and shockingly underpaid. Dr. Bostock Hill, the Public Analyst for the County of Warwickshire, said to me:

"Every sanitary inspector has more put upon him by Government and by the municipal authorities than he can do."

He has a multiplicity of most responsible duties, and is expected to have a multiplicity of scientific acquirements. He must have the nose of a jackal and the eye of a lynx. He must know all about architecture, drainage, water, food, meat. All this is expected of him; and in return what does he get? The barest of livings.

In many large boroughs the municipalities think that their borough inspector is properly remunerated with a salary of from £100 to £150 a year. This is for the chief inspector; the sub-inspectors begin on twenty-five shillings a week. He has no old-age pension nor superannuation allowance.

Then, again, the inspector has to fight against the supineness, or the interested opposition, of his employers, the Borough Council. This authority body is often composed largely of tradesmen, who may have their private reasons for wishing to discourage excessive zeal under the Food and Drugs Act. The very man whom the inspector wishes to prosecute may be a member of the council. In vain will he look in it for the virtues of a Brutus. The Act seems designed to allow the offender to escape; and the word "escape" is used in its literal as well as in its figurative sense.

Before the public analyst returns his report on a sample submitted for investigation, a couple of weeks must elapse. Then the prosecution has to be authorized and the summons taken out. Between the serving of the summons and its hearing fourteen clear days have to pass.

A case was recently dismissed by the magistrates because the summons was marked for hearing on the fourteenth instead of the fifteenth day after service. So that from the time when the sample is first seized till the case comes on for trial the swindling tradesman has about five clear weeks in which to act to the best of his interests. He often takes advantage of that period of grace to sell off everything he has in his shop, and to abscond without paying his rent. In most borough inspector's offices throughout the country is a list of men and women who are 'wanted' under the Food and Drugs Act.

Then, again, it is by no means certain that, terrible as may be the report of the public analyst on the sample analyzed, and clear as may be the guilt of the defendant, even when the inspector has got the swindler into the dock, he is going to win the case. Prosecutions fail for the most

trifling non-observance of the technical provisions of the Act, which is drilled full of loopholes for escape.

After completing the purchase of a sample in a shop the inspector is obliged to make a declaration in words to the following effect: "It is my intention to submit this sample for analysis to the Public Analyst for the Borough (or County) of —. I shall divide this sample into three parts, which I shall fasten up and seal with the borough (or county) seal." If the inspector omit the word "public" out of "public analyst," or if he omit to specify that it is "for analysis," the summons would be dismissed. Any legal quibble seems to satisfy the great unpaid.

Municipal parsimony all over the country limits the number of samples which the inspectors may seize for analysis. Throughout the whole country in 1903 only 78,077 samples were examined. The average was one sample in the year for every 417 of the population for the whole country. In many boroughs the average is much less. For the purposes of this article I investigated the working of the Act, not only in the metropolis and one or two big provincial cities, but also in a borough of less than 100,000 inhabitants. Here the inspector is limited to 100 samples a year. Of these 50 per cent. must be samples of milk, 25 per cent. butter, and 25 per cent. miscellaneous samples of every kind. The analysts fee per sample is half a guinea, so that the whole amount spent on analysis by this borough falls under sixty pounds. There are in this particular borough close upon 250 registered milk-sellers, so that under the municipal arrangements it would take five years to take one sample from each.

What possible check can such a system have upon the remunerative adulteration of milk? At the worst, on a first conviction the swindler risks a petty fine, and then may hold himself safe for another five years.

It was in this borough that one day I followed a sample of milk from cow to conviction. I ought to write "from cowshed to conviction." But as a matter of fact it is quite possible to adulterate milk in the cow herself. If you feed a cow on grain (usually mash from the breweries) she will produce larger quantities of milk of a decidedly watery kind; but under no other circumstances can the dairyman plead that if "the milk is wanting in fatty or other solids it's not my fault—it's the fault of the cow." Magistrates often take that as an excuse, but it has no scientific basis. A cow that is properly fed is conscientious in the discharge of her duty.

Dr. Bostock Hill declared, speaking from a long and wide experience, that the cow, except where improperly fed on purpose, is never an ac-

compliance before the fact. In the particular instance to which I refer, the sample which we seized proved to contain 46 per cent. of added water. The analyst reported on three samples which we had taken in the course of that expedition; and the following was his report. (Samples I and II. were genuine and Sample III. adulterated):

Analysis.	Sample I. per cent.	Sample II. per cent.	Sample III. per cent.
Solids not Fat...	9.50	9.50	4.23
Fat...	4.30	3.80	3.81
Water...	87.24	87.70	93.34
	100.00	100.00	100.00

On this occasion the conviction obtained was satisfactory. The farm-woman was fined £25 and costs.

But milk even when adulterated with 50 per cent. of added water contains at least some nutriment. Most of the cheap condensed milk which is sold in England contains none at all. This milk comes into the country from Ireland and Holland. It sells at twopenny or twopence-halfpenny a tin, and is usually put up in gaudy and attractive labels. On these labels the purchaser reads with satisfaction that the contents are guaranteed "machine-skimmed."

As, that it is! and with a machine so pitiless that every particle of nourishment is removed. I had an interview with the manager of Nestle's Milk, the pioneer of the condensed milk trade in this country. He naturally feels concern at the evil reputation that skimmed milk is getting from the pronouncement of crowners' quests.

"The stuff is practically buttermilk," he said, speaking of the machine skimmed milk. In the State of New York the sale of it is forbidden. It is skimmed milk with sugar added. "The sugar often causes diarrhoea, and helps to finish off the child who has been debilitated by a long period of starvation."

The cost to the manufacturer is nothing more than the cost of the sugar and of the tin. But for the demand for this milk by the English mothers, the Dutch, German and Irish farmers would have to throw it away. It is what is not wanted by the Dutch, German and Irish pigs that is sent into this country for the English children. Its sale should be forbidden in England. It is a dangerous thing. The child who is fed on it dies of starvation. Our poor, who use little other milk, cannot distinguish, and murder their children unconsciously. The borough of Camberwell some years ago placarded the streets with a poster warning the women of the danger.

Provided that the manufacturer marks the stuff as "machine-

skimmed" it matters little what he puts into his tins. And that of this generally. There is little or no inspection of food of this kind.

One reads every day of people who die of ptomaine poisoning from eating things out of tins. Here also all kinds of trickery is practised. There is a brand of tinned lobster on the market which is made by an ingenious Frenchman out of devil-fish. Much of the tinned tunny which is consumed in England is veal. Truffles in bottles are often old kid gloves in a new form. Apropos des boites, rum has been distilled from old hood-leather, which has the peculiar aroma of this cordial.

But when our children have been hungered with diluted and starved with machine-skimmed milk, the risks that they have incurred in taking a natural food have by no means reached their tale. It is a very disgraceful thing that no misdeed is the supervision of things in England that quantities of talerulus milk are every day put on the market.

Koch's nonsensical theories have been entirely discredited; and only at the beginning of this year the Permanent Committee of Defence against Tuberculosis, acting under the Ministry of the Interior in France, placarded the whole country with official posters warning mothers that cows are often subject to consumption, that consumption can be transmitted to children in the milk of diseased cows, and that it is dangerous to feed children on milk that has not been thoroughly boiled. How many English mothers know this, and when shall we see such posters on the walls of our English towns?

And this brings me to a part of my subject where I have to draw attention to a veritable scandal. It is this: With the exception of some of the bigger towns, there is in England no inspection whatever of the meat that is sold in the butchers' shops. There are qualified meat-inspectors in London, and in about twelve other boroughs in the kingdom. Elsewhere your butcher is at liberty to sell you the meat of tuberculous animals, the meat of animals which have had anthrax, or septic peritonitis, or actinomycosis, or fever, or any other loathsome disease. In these boroughs the sanitary inspector is supposed to supervise the butchers. But he has neither the technical knowledge necessary nor the time. The very most that he can do is to see that the slaughterhouses are kept fairly clean. How can more be expected of him? Take anthrax, for instance, one of the most dangerous of diseases which affects butchers' meat. It requires the knowledge of a trained veterinary surgeon, with a good knowledge of bacteriology, to detect this disease in a piece of meat.

"When the viscera and offal of an animal which was suffering from

anthrax have been destroyed, the disease can only be traced by microscopical investigation."

This is what Mr. Hotherhall, the inspector at the Birmingham Meat Market, told me. Mr. Hotherhall is one of the most experienced meat inspectors in the country, an invaluable public servant, who last year, as it may be remembered, was nearly murdered by a butcher in Newton Row. He has only quite recently been able to return to work, a wreck of his former self. The outrage took place one Sunday, when, in consequence of an anonymous letter, dropped into the letter-box at his office, warning him that a quantity of tuberculous meat was being put on sale in Newton Row, he visited the butcher's shop. Here he was attacked from behind. His dying depositions were taken at the hospital. Fortunately for the Health Department of Birmingham he recovered.

I had several interviews with him, and he gave me some appalling facts about the litch that is sold all over the country—as butchers' meat, deadly poisonous stuff, swarming with the bacilli of all the most dread diseases. He himself condemns in Birmingham Meat Market over 320 tons of meat every year. Of this meat almost every piece would be sold and consumed in a borough where there is no meat inspection. Indeed, even worse meat is sold there than any which is seized in the boroughs where there is a meat inspector.

"We buy only the best, and that turns out wrong. Butchers from the outlying districts buy cattle at the same sales which we wouldn't look at, which would be sold from us, and are able to sell every pound of it." Thus to me Mr. Robotham, of Birmingham Meat Market, who is one of the largest dealers in home-fed and home-killed meat in England.

I had a long talk with him at his stall, and he told me that he had voluntarily surrendered, as unfit for food, during the past year and nine months, over £600 worth of meat (cost to him), every ounce of which would have been sold and consumed in any of the neighboring boroughs where there is no inspection. "The bulk of it," he said, "was affected only very slightly with disease, the major portion being tuberculous."

He then made the following statement to me, which he was good enough afterwards to send me in writing: "I am compelled to believe that this destruction of meat is based upon the best available information relating to what is good for food and what is not, and that the Corporation officials are doing no more than their duty in destroying it in the interests of the public health; nor do I object to surrendering for destruction that which is harmful to human beings."

"I, as a butcher, occupy the very objectionable position of being between the hammer and anvil. In other words, the agriculturist sells

me his unsound animals as sound ones, and then the authorities take them from me in the interest of the public, at my personal loss, a loss most unfair and unjust, and almost intolerable.

"The position between the butcher and the public is far worse. The public by means of the constituted authorities, are doing their best to protect themselves; and in public abattoirs, such as exist in some of our large cities, the inspection is rigid, effective, and complete. But even in these well-governed cities there are a number of private slaughterhouses where the inspection is of necessity very occasional, and not at all of an effective character. It is absolutely impossible, under such circumstances, to inspect more than a fraction of the animals slaughtered, as no inspection can be effective unless the whole of the organs of the animal be submitted for inspection.

"In such places where the trader is prepared to take the risk (a risk which is very slight) of discovery of a diseased animal during slaughter, the whole of the diseased portions can be removed and destroyed; and in that manner the portions not diseased can be sold to the public without any inspection.

"There is another case of district—(practically the whole of England)—where there is absolutely no inspection of meat at all. There are no meat-inspectors. There is a sanitary inspector who pays the annual visit to the slaughterhouses, never looks at the meat at all, would not know it if he did, but is usually well pleased and goes away satisfied if there is a sufficient lime-wash on the walls, and the floor is in good condition."

In France, in every town, no matter how small, a veterinary surgeon is appointed by the municipality, who visits the meat market and pays two visits regularly every week to the abattoir. In Paris the supervision is even more effective. Besides the regular inspectors, the students of the great College of Veterinary Surgeons visit the cattle markets and abattoirs every week in the quest of instruction and information. The diseased meat seized in Paris is sent to Zoological Gardens, which accounts for the miserable appearance of the wild beasts which are fed on it.

So seriously is the danger recognized which menaces the public from the consumption of diseased meat that recently, in more than one department, it has been ordered by the prefect that in small places of less than three thousand inhabitants, where the municipal budget cannot afford to pay a veterinary surgeon to act as meat-inspector, every animal must be sent up to the abattoir of the capital town of the department (or county) to be slaughtered. The private slaughterhouse which flourishes in England has been abolished years ago throughout France.

"The private slaughterhouse," said Dr. Bostock Hill, "is the crux of the thing. Every private slaughterhouse is a menace to health." In Birmingham alone there are several hundred private slaughterhouses.

We content ourselves with ineffectual Blue Books and recommendations from nobodies to nobody. It was pointed out to me the other day in France that one reason why the consumption of horseflesh is spreading so rapidly in the country is that the horse, like the goat, is never affected with tuberculosis—another argument in favor of fresh air.

In England, curiously enough, we set our faces against the use of horseflesh as food. The adulterators, however, have long ago seized on this material. I do not refer here to the tinned delicacies and certain meat extracts which return to us from abroad the new incarnation of the poor horses which we export from Grimsby, Middlesbrough, Goole, and a hundred other ports to the shambles of Germany and Belgium. I am speaking of what is known to the trade as "Jack," which in the form of sausages, brown, etc., goes straight from knackers' yard to consumer. It is a million times less noxious, of course, than "faggots," which are the staple meat food of the poor.

Faggots are a kind of stew of the liver and other offal of animals; and it is a certainty that much of the meat used in their preparation is the diseased stuff which has been removed from the carcasses of animals slaughtered in private slaughterhouses. This is what our poor children are fed upon.

We have, in the matter of protection against adulteration, everything to learn from Continental nations. In France and Germany, milk-adulterators, for instance, are not only fined and sent to prison, but a large poster announcing the fact of their conviction is posted up in front of their shops, and has to be left there for a fortnight.

I have described how effective is the inspection of meat in France. Adulteration of every other form is as adequately coped with.

Here is what Mons. Girard, of the Paris Municipal Laboratory, told me in an interview I had with him on the way in which Paris keeps watch on the swindling tradesmen:

"Our service is a double one. There are official inspectors, twenty in number. Each of these inspectors has an allotted beat to go over every week; and it is his duty to enter any shop where he may suspect that adulterated goods are being sold, and to seize a sample. This sample he divides into two parts—one for the tradesman, and one for the laboratory. If the sample, on analysis and counter-analysis, be found wanting, a report is addressed to the Public Prosecutor, from whom the defaulting tradesman gets to hear.

"But the laboratory is also open to the public; and any person wishing to have a sample analyzed can bring it to us for the purpose. Our analyses are of two kinds—quantitative and qualitative. The first kind merely establishes if the sample submitted is (1) Good, (2) Bad, or (3) Injurious to health. Such an analysis is gratuitous. Suppose that you suspect your grocer of selling you adulterated sugar. You bring some of it, i. e. a. You enter the public room there on your right, and you hand it to one of the clerks. He invites you to fill in a form with your name and address, as well as the name and address of the tradesman from whom you bought the sample.

"He then gives you a number which corresponds with the number on a printed form which meanwhile has been attached to your packet. In three or four hours you return, and in exchange you receive a white paper, on which is printed 'The Director of the Municipal Laboratory certifies that the sample handed in under No. is (good, bad or injurious).'

"This information costs you nothing, and you know whether or not to continue trading with that grocer. If you want a qualitative analysis, you have to pay sixteen shillings, and you have to wait a day. This analysis will give you the component parts of your sample.

"You mustn't use either document to injure the tradesman. The law is in our hands. You remember that in depositing the sample you gave the grocer's address. Well, if the sample is found to be bad, before the analysis is in your hands two of our inspectors are already on their way to the grocer's shop. Here another sample of the same stuff as yours is seized; and if it is found to be as bad as yours, the grocer's address is sent to the Public Prosecutor for immediate attention. More than that, if you haven't time to come all the way to the Boulevard du Palais, you can deposit your sample at any police-station in Paris.

"We have a service of carts to collect them daily. I cannot say that the public takes very great advantage of these facilities in Paris. It is the indifference of the public which fosters adulteration. Perhaps when people get to understand," added Mons. Girard, "what terrible diseases, mental and physical, originate in the consumption of adulterated food and drink, they will be more active in their self-defence."

In England we have no such facilities. We have no such means of self-defence. We have an inadequate law, inadequately administered by ignorant magistrates. And the inspectors who are supposed to carry this law into effect are so shamefully overworked and so miserably underpaid that one can only wonder that we ever have the satisfaction of seeing the rogues who prey on our health and on our very lives, if not punish them, at least unmasked.

Paul Morton, Human Dynamo.

BY EDWIN LIFEYRE IN COSMOPOLITAN.

A breezy character, dandy of the ex-roadman and ex-Cabinet Minister, who has been set the task of reorganizing the Equitable Life. Paul Morton, the Westerner, is a modern American product, an example of what Western influences are doing for the East. He is perhaps best known today as the late Secretary of the Navy in the United States Government, a position to which he was called on account of his splendid abilities.

ON a steamer crossing from England there was a man whose face seemed so strangely familiar that two-thirds of the passengers bowed, more or less uncertainly. They knew him and yet they did not. It was evident he must be some great personage. He was a chewing-gum manufacturer, whose omnipresent portrait adorned walls, fences, magazine pages and newspaper advertising columns. He was the most "successful" man on board, though there were many able business men, richer men, writers—at least one—clergymen, lawyers, politicians. But the chewing-gum man was it.

This may be fame and not the American idea of success. But is it not the frequency with which a man's name appears in the newspapers that after all is the popular measure of success? How else do you account for so many newspaper-made reputations? Every few minutes a new man of the hour bobs up. If he makes good, he stays among the permanent successes and gets so many columns a year for life. If he fizzles out, he merely relapses into the old unparagraphed obscurity. At this moment Mr. Paul Morton is one of the most he-newspapered men in the country. Every day what he has to say or does not say about the Equitable Life is read by millions, like the physicians' bulletins of the condition of some illustrious patient. By the time this article is printed, some other man will probably be running ten or fifteen columns a day ahead of Morton, but Morton will, without any doubt, be heard from again. People read a great deal about him at the time of the Burlington strike in 1887, and forgot all about him until Mr. Roosevelt appointed him Secretary of the Navy. The country at large did not know Paul Morton. The country at large did not care a tinker's damn about Paul Morton. But the Americans take an interest in the heads of our Government and have a sense of humor. Here was a man who was not a politician, but only the son of a Democrat who had been in Cleveland's Cabinet appointed to a Republican Cabinet. He had been a railroad man all his life; the first ship he ever saw was probably one of the schooners that carried his father over the Nebraska prairie; as a navigator, he could

boast of two hundred thousand miles in a Pullman. He was placed at the head of the Government's ship-boy department. But also, here was an unconventional President asking a successful business man to run that same department in a business-like way, and confident that the business man would make good as soon as he was familiar with the details. All that was worth much space. Miles of columns were cheerfully written and cheerfully read. The President was fighting certain abuses of the railroads. The railroads liked his ideas so little that they had much to say. Mere space. The Atchison had violated the law and granted rebates. Paul Morton had been the Atchison's traffic man. Paul Morton was the President's Secretary of the Navy and the President must feel uncomfortable and Mr. Morton must be getting seasick in his revolving office-chair in Washington. Miles of columns were cheerfully printed and cheerfully read. Then, after more space was used up in wondering why, if guilty, Mr. Morton's name had not been covered with obloquy, Mr. Morton resigned his Cabinet office to take charge of certain large railway interests in New York. But he at once became involved in another matter.

Early in the present year certain squabbles among officials of the Equitable Life Assurance Society drew public attention to the affairs of the company. Upon the reports of a committee appointed by the directors, and that of the State Superintendent of Insurance, the contending factions hastened to make peace and unite in order to defend themselves against the most serious, if not incriminating, charges—use of the company's money in private enterprise, exorbitant salaries paid to favored officials, flagrant nepotism, etc. The scandal grew so that it was heard the world over. Loud were the outcries of agents and alarmed policy-holders, predicting the ruin of the company. The crowd must be put out. The newspapers said so at great length. Then came Mr. Thomas F. Ryan's highly intelligent coup—some of the newspapers even called it patriotic. He bought a controlling interest in the stock, and the president and vice-president, who started the row in the first place, handed in their resignations.

Paul Morton was made Chairman of the Equitable Board, with plenary powers. More miles upon miles of columns about Paul Morton. Then he was elected president of the society, at a salary of one hundred thousand dollars a year, which he himself cut down twenty per cent. because he had cut other salaries in the company.

Who is Morton? What is Morton?

He is a Westerner. Not enough Eastern men know what that means. Hetty Green, whose son lives in Texas, and who has traveled extensively

and lived long enough and made money enough to know what she is talking about, said once: "In the West men are bad only on the surface. In Wall Street they are bad clear through." In the West, big men do things and wish to keep on doing them and other people hope they will. In the East, big men do things, and wish to keep on doing them and other people pray they won't. In the West big men and little men want no favors, only a square deal. In the East, the big men, in the matter of deals, want nothing but favors from political "friends," and presidents of financial institutions, and of all the Commandments keep in mind only the eleventh, "Thou shalt not be found out." Paul Morton came from the West. There he hoped to rehabilitate the Atchison, rebates or no rebates. He is now in the East. Let us see whether he will rehabilitate the Equitable, Wall Street or no Wall Street.

Paul Morton is the second son of the late J. Sterling Morton. If there is anything in heredity and the influence of environment, it means that he began being a hustler and a Westerner long before he was born. The father was a very remarkable man, a born pioneer, the type all Americans are proud of, able, original, absolutely fearless, absolutely tender, a man of convictions and of principles. J. Sterling Morton and Caroline Joy French were engaged to be married when he was eighteen and she sixteen, but they did not wed until four long years afterward. He was a graduate of the University of Michigan and of Union College, and even while at college was an editorial writer for the *Detroit Free Press*; his father was a banker in Detroit, but he wished to start life in a brand-new country where he could be what he made himself, and in 1854 he went to Nebraska, partly by boat, partly by rail, and the last few hundred miles by wagon. The young couple homesteaded on a quarter-section, three hundred miles from a railroad. The same day he settled there he called his one hundred and sixty acres "Arbor Lodge," and began to plant trees. There was plenty of good red blood in the young pioneer, and plenty of poetry. He grew up with the country, of which he became a part, being influenced by the life he led. He loved men, and he loved trees. He was the originator of Arbor Day. He called himself farmer all his life. His acres grew to a thousand. He became Secretary of Agriculture under Cleveland. And he did not die rich. The three Morton boys, sons of that mother and that father, are making the thousand acres into the greatest arboretum in the West.

Paul Morton, the second son, is forty-eight years old. When he reached the ripe age of sixteen, his father offered him the choice between going to college and going to work. Paul elected to go to work. Why? Because his elder brother had gone into the banking business and was

making a success of it. It was an example worthy of emulation. The full force of Paul Morton's decision is not grasped until the unintelligent reader is informed that his elder brother was a year and a half older than Paul. Joy Morton was seventeen and a half and already had done enough to show he was walking successward. So Paul Morton went to work for the Chicago, Burlington & Quincy Railroad. It is the false note in Paul Morton's business career that he started as office-boy. It sounds too good to be true, too old-fashioned. But that's what he did. He began on twenty dollars a month and borrowed five dollars a month from his father in order to pay his board at a decent eating-house. On his twenty-first birthday he was made assistant general freight-agent of the Burlington system. He had a phenomenal memory—nobody consulted the rate-schedule when he was around; they merely asked him and he told them. His grasp on the traffic business was remarkable. At twenty-five he was made general passenger agent. Not long afterward he was appointed general freight-agent. In 1887, at the time of the strike, he was the Burlington's official spokesman for publication. Nobody, not the president nor the vice-presidents nor the directors, was permitted to say a word to the newspapers. The reporters were directed to Paul Morton; if they wished to ask questions, and he answered them. He was not a college man; the Burlington is his alma mater. You would not think of a railroad as a training-school for diplomats, but that is what Morton was at thirty—a competent railroad man and a diplomat. He "did things"; also he could talk intelligently. Newspaper men who have had occasion to listen to older and more prominent men, men of wide experience in various walks of life, will know what a man of thirty must be who talked day after day and never lied and never equivocated, and yet never made a break. That's the remarkable thing about Western men who have not had a collegiate education. They have self-reliance, keen observation, a contempt for pettiness, a remarkable power of assimilating forms of polite diction even while preserving a picturesque individuality of spoken speech; also the American sense of humor. All this and the ability to work—veritable human dynamo.

Paul Morton stayed with the Burlington until 1890, when he went with the Colorado Fuel and Iron Company as vice-president. When the presidency of the reorganized Atchison road was offered to Mr. Ripley, he accepted, provided the directors would make Paul Morton vice-president and his active assistant. He knew Morton, knew what he could do and knew what he had done while they were both on the Burlington.

The Atchison had been reorganized, but it needed what was far harder to accomplish—rehabilitation. It was out of a receiver's hands to

be sure, but it did not pay its debts promptly, and it did not keep its promises. It granted rebates as the other roads did, but it did not make good when the time came, not because it was wrong to give rebates, but because it needed the tainted money. It had no credit. It was unpopular with shippers. Paul Morton's position was, as he himself described it, that of business-getter for the road; and he got his share. To be sure, in 1896 the industrial pendulum had touched the lowest point and was about to swing the other way. It was practically the beginning of the end of the period of depression. For the fiscal year ending June 30, 1896, the gross earnings were \$28,600,697, the expenses of operating \$22,071,275, and net earnings of less than \$7,000,000. Five years later, the gross income was \$54,474,823, the operating expenses \$32,262,945, and the net earnings \$22,211,875. It was a misfortune to be a holder of Atchison stocks in 1896, and great luck in 1901. Its adjustment bonds were selling then at thirty cents on the dollar. They have sold at their face value since. To-day the dividends on that stock aggregate nearly five millions a year. And Mr. Morton, it is admitted by the Atchison, did much to rehabilitate the road.

Boldy stated, the story of Morton's life does not sound particularly interesting—a railroad man from his sixteenth to his forty-sixth year; then lifted into national prominence by his appointment to the Cabinet; then made Chairman of the Equitable, appointed to bring order out of chaos. And when you come to study the man, you find very little picturesque of personality, no abnormally developed traits, no "salient features" in his psychological physiognomy. And yet Paul Morton is an extremely interesting man, because he is a very good type of a very good sort of American, a type which so far has thriven best in the far West. And, let it be said, there are enough Paul Mortons in this country to make a man who has been reading the newspapers and magazines lately feel fairly comfortable, rebates or no rebates.

To begin with, Paul Morton is the son of his parents—the young couple that, accustomed to a life of literary culture and refinement and bodily comfort, settled in a remote spot and worked hard and saw it become part of a prosperous community. That was the parents' education—from wilderness to civilization. Think of the life of the twenty-two-year-old boy and his girl-wife. If you think intelligently, you will cease to wonder why I emphasize this point. At sixteen, Paul was fit to live because he was fit to work, and he was willing to work because his brother, who was under eighteen, was already a business man. This is no fling at collegiate education; it is a statement of facts—the condition, not the theory, that confronted many young Westerners. He went to work

for a railroad and he rose steadily, not because of any pull, but because he earned his advance. He was more competent than the other office-boys. The boy who was scarcely a boy at sixteen, was a married man, with a married man's responsibilities, at twenty-three. At forty-six he was a grandfather. Paul Morton to-day looks younger than his age. What kind of a life must he have lived? Why, the kind of life a man must lead who is a grandfather and doesn't look it. He is a big man, tall and well-built, but quick and decisive in his movements. He has worked all his life as few men work even out West, and since he was not working to increase his own fortune, he must have worked because he loved to work. He is one of the men who do things, do them well and do them for a salary. That is text enough for fifty sermons to our young men who envy poor rich John D. Rockefeller and never skip the racing news. Morton is never happy unless he is working; the busier he is, the happier he feels. He is of that blessed Western type of man who will tackle any job and cannot rest until it is done. To leave it unfinished is to be made unhappy, uncomfortable, conducive to insomnia; and it is scientific work, good, sound brain-work, and not mere gluttony for labor—the kind of man, in short, who will invent labor-saving devices not to save labor but to enable the same number of men to accomplish twice as much as before. He tries to finish all his day's work every day, and the amount he has to do is enormous. He has relays of secretaries. He works all day in his office, but there are too many people who must be seen and listened to, who use up much time. There are letters to write and instructions to give, so, after leaving his office he goes home, dines, and an hour afterward is working, reading letters, dictating answers, et cetera, until midnight. In the morning, before he starts for his office, he has kept another secretary busy an hour or two. This gospel of work may be the gospel of a fanatic or of a Russell Sage, but there is this to be said in extenuation, that Morton is not paid on a percentage basis nor by piecework, and that he is not only a very clear-headed man but a very strong one, physically, who has always been a human dynamo. To be sure, he is now receiving a salary of two hundred and sixty-six dollars per working day. He doubtless earns it. Other Presidents of life insurance companies receive more. They may be able. They will not work harder. The day's routine of the man must be interesting. How can he work to entitle him to say he can earn more than fifty clerks? What can he do? He is the head of the company; he is the foreman. He gets work out of others. He obtains results. The ability to do this is rare. He has it.

The only time I ever heard him give commands to his subordinates

I was impressed. His voice was not harsh, his manner not unkindly; yet there was something about both which somehow produced an effect of machinery and steel—precise, clear-cut, emotionless, demanding not only obedience but promptness and intelligence in order that the other cogwheels might not cease to function. It looked as if he might be a hard taskmaster, a master whose only thought was that a particular piece of work should be done by a particular man in a particular way. But this is not so, for the simple reason that Morton is far too intelligent to be unreasonable. He does not expect his men to work as hard as he does, because he knows few of them can even if they would—they haven't the head nor the physique for it. But he does expect them to work hard, and, moreover, he expects their work to show results. He insists upon it. If the results don't show, the man must make room for one whose work will. Efficiency first, last, all the time. Not a pleasant thing for the incompetents, but that only means that incompetents need not starve if they will reduce their ideas as to the position they should occupy.

Morton, of course, is more than a working-machine. If he were not, he merely would be a freak. As chief "business-getter" for the Atchison he had to help the rehabilitation of the road, to inspire confidence among shippers in its good faith, in its willingness and its ability to keep its promises. To make the public realize that the new Atchison was not the old, he had to be a business politician, a railroad diplomat. I should say that the diplomacy of Paul Morton might lack the finesse of certain Eastern financiers, but that it is more refreshing, more direct, and accomplishes its object probably more completely and certainly more quickly than the other kind. His is the Western attitude, which assumes that the majority of men are good. He can be a good fellow, therefore, he cause he is normal and healthy and an optimist, with a sense of humor. His diplomacy in business is that of the Westerners, to wit: "The majority of people are square. I'm square. I'll tell the truth" bluntly and I'll bear the truth bluntly. If we agree, very well. If we can't agree on all points, let us agree on as many as we can." Such men have no time to waste in scuffling for an opening nor in artistically producing erroneous impressions. They don't do business in a subtle way nor by indirection, because they have so much to do before they die. Men have fooled Morton time and again. No man has ever fooled him twice. He hears this in mind when he is "slinging up" strangers, for he is not ashamed if one fools him once. But the second time the man tries he might better have tackled a live wire. I thought once he might be vindictive—he was so utterly without of the sentimentalism that even Wall street men sometimes show. I said: "I'd like to ask you a question. If I knew you intimately, I should

not have to ask it. But there is no use in asking unless you answer with absolute frankness."

"Ask it," he said, very quickly.

"How do you feel toward people who get the better of you?"

"My fault for letting them. Why feel?"

"If a man should say something mean about you?"

"Look here. Success is like the sunshine—it brings the rattlesnakes out. They can't help being rattlesnakes, can they? What's the use of getting angry?"

"Revenge?"

"Boosh!"

I also asked him, some time afterward, if he had Ideals. I sought to convey by my manner that I thought all men should have Ideals with a capital I. He answered, "I haven't any."

"I didn't mean hobbies," I explained severely, "but Ideals. You must wish to do something."

"Yes, work."

"Hang it, what is your philosophy of life?"

"Did you ever hear the Western advice: 'So live your life each day that you can at any time look any damn man in the eyes and tell him to go to hell'? That's my philosophy of life."

He is not a profane man, and he does not carry a chip on each shoulder. He will assuredly not be misunderstood.

Such in brief is Paul Morton—a hustler, best before his birth in having such parents, best in being born a Westerner, best in his early marriage, best in being a grandfather at forty-six, best in his love of work and his active mind and his robust physique and his utter fearlessness. He is the antithesis of morbidness. He is eminently practical, almost a utrance, and yet he reads not only prose but verse. He loves his family and his affection for his father amounted to veneration. He knows men; he has seen all sorts and conditions of men, good, bad and worse, under all sorts of circumstances, and to-day, in his forty-eighth year, he believes that men treat you as you treat them. All he asks is what he always is willing to give—a square deal. It is the motto of the real American—a square deal! His success has been due to his traits and to what is called executive ability. He is beyond all question a great organizer. You don't have to know him very long to know that. It is a difficult thing to describe executive ability. A man is born with it, as a man is born with "personal magnetism" or a knack for rhyming. He works and he gets work out of men, not by kindness, not by harshness, but because he has that mysterious power. The Equitable Life Assur-

ance Society may need a great insurance expert some day at its head. What it needs to-day is a man like Paul Morton. And he is there.

I cannot defend Paul Morton in the matter of the Atchison rebates, for the simple reason that I cannot accuse him. The investigation by the Government did not show that Morton was guilty. Men may differ with Mr. Roosevelt on every conceivable subject, but I do not think there are many who know him as a man who believes Morton was "white-washed" by his orders. If Mr. Morton had not been Secretary of the Navy, I think the investigation would have been carried on along precisely the same lines that it was. He began his career as a railroad man at a time when the railroad business was conducted with little regard for abstract ethics, when rebates and other bad practices were deemed necessary evils, law or no law. Paul Morton was chief business-getter for the Atchison, and the Atchison needed all the business it could get and more. I do not know whether he authorized rebates or not, or if he closed his official eyes to what zealous subordinates did. But I do know that the son of J. Sterling Morton does not lie, that he does not fight unfairly, that he believes in a square deal, that he has worked all his life very hard and very intelligently, and worked on a salary—that is the way he is still working—and that when I say "Paul Morton—Westerner," the man who knows the West knows all that is good and that is bad of Paul Morton.



Christie's.

BY MARY SPENCER WARREN IN CASSELL'S MAGAZINE.

Romantic, indeed, in many ways, is the story of the rise and growth of the freest auction business in the world. Though no longer does a Christie peddle over its counters, yet from father to son, four generations of Christies managed the business. The description of the sales, attended often by the aristocracy, anecdotes connected with certain articles and the fabulous prices brought by various lots are recorded to the edification of the reader.

CHRISTIE'S may be termed a national institution, and it is known throughout the universe as the premier auction room for the sale of the classical products of all centuries and nations.

James Christie, the founder of the house, was born at Perth, and as a lad entered the Royal Navy, serving as a midshipman until he was about twenty years of age. Promotion in the Senior Service was slow, however, and young Christie was ambitious; so he presently threw up his profession, with its doubtful reward of riches, and made his way to London to try his fortune in commerce. A Mr. Annesley had already established himself as an auctioneer in Covent Garden and to him the former midshipman soon became engaged as an assistant. Continuing in this firm for some years, and so acquiring a valuable experience, James Christie by-and-by started for himself as a book auctioneer in Wardour street. He afterwards removed to Spring Gardens, and became a general auctioneer, taking into partnership with him a Mr. Ansell.

Ultimately Christie migrated to the premises in Pall Mall which had formerly been the Royal Academy, standing next to Schomberg House—at that time the residence of Thomas Gainsborough, and now the town house of Prince and Princess Christian.

The first sale in the Pall Mall rooms took place in December, 1766, about four years subsequent to the actual foundation of the house. The art of advertisement was, of course, at that time very much in its infancy; but a notice of a coming sale by Christie may be found duly set forth in Lloyd's Evening Post for a date in December, 1767. James Christie, by the way, does not seem to have confined himself solely to auctioneering, for in 1769 he became one of the twenty original proprietors of The Morning Chronicle, and in 1772 part proprietor of The Morning Post; rather a remarkable fact when it is remembered how entirely opposed the two journals were to each other's doctrines and methods.

Christie's rooms soon became famous, and works of art of every

description were there consigned to the hammer in the midst of an audience many of whom were of the highest rank. The method occasionally employed to gather a desirable assemblage together would seem remarkable at the present time, when the notice of a forthcoming sale of art treasures is sufficient of itself to crowd the rooms with possible buyers.

James Christie, sen., took the greatest pains to obtain the presence of the aristocracy, and gave evening receptions, open only to those of undoubted position, and on a careful scrutiny of cards at the entrance. And private view day was a fashionable resort where everybody of importance was wont to repair to exchange civilities and gossip, quite as much or more than to see or purchase the catalogued goods.

And this was not all, for there is an undoubted record of how on one occasion, when a more than usually noteworthy sale of pictures was to take place, Christie personally waited upon Lord Chesterfield who, although retired from public life, was yet a great authority on all art subjects, to details of which he devoted much of his time. That he would give eclat to the sale by his attendance was the petition of the auctioneer, to which the great man graciously responded in the affirmative, at the same time giving permission that the fact should be made generally known. On the day in question a great crowd assembled at the rooms, and Lord Chesterfield duly put in an appearance, arriving in a State coach drawn by six horses, with several liveried servants in attendance, the latter clearing the way for his Lordship and standing on guard round a space specially kept clear, wherein was placed a raised luxurious seat.

But Christie had many distinguished patrons and friends, among the latter being Sir Joshua Reynolds, Garrick, and Thomas Gainsborough—the last named, indeed, painting a portrait of the auctioneer which became henceforth a prized family possession. A pen sketch of James Christie shows him to have been a tall, well-set-up man of distinguished appearance, clad in knee breeches, low shoes and buckles, blue coat and ruffles, wig, and horn spectacles. In addition, he had the advantage of possessing much persuasive eloquence, combined with a courtly manner, so that it is not surprising that he ultimately commanded a large clientele.

At the period of the French Revolution of 1792 many fugitives from France, Italy, and Holland found their way to London, and being, on account of their hasty flight, much embarrassed for ready money, were reduced to parting with pictures and curios, and in many cases even their jewels and family plate. In the majority of instances these

were consigned to James Christie for public sale, and many wealthy members of the British aristocracy became the ultimate possessors of these treasures.

Christie outlived his three great friends—Sir Joshua Reynolds, Thomas Gainsborough, and David Garrick. Many of the paintings of the two former were sold by public auction at the Pall Mall rooms, as were also many of the effects of the last-named of the trio; and it is said that on the latter occasion Christie publicly alluded to the great service Garrick had rendered him on an occasion when he had been in temporary financial difficulties. Garrick, indeed, had amassed much wealth by his literary work, chiefly in the direction of plays, and it is reported that he helped his auctioneer friend by a loan of £10,000—a very large sum in those days.

Christie died at the Pall Mall premises in 1803, and thenceforth the business was carried on by James, the eldest of the deceased's five sons. This son, who was born in 1773, was educated at Eton, and very early in life displayed scientific literary ability of a high order. Some time subsequent to his becoming the real head of the firm he wrote and issued—some, indeed, only for private circulation—several learned productions, among which may be mentioned an "Early History of Greek Sculpture," and a work on "Etruscan Vases." To quote an authority, "James Christie the second raised the business he followed to the dignity of a profession," and it is everywhere conceded that his taste and judgment on all works of art were undisputed, and he was referred to as the accredited authority of the period.

Evidently the Pall Mall premises, spacious, as they were, were scarcely sufficient for the requirements of the ever-increasing business, for the firm seems to have occasionally hired rooms at an emporium and exhibition in King street, the scene of a former gambling hall. Here various side sales were held in certain of the apartments which were habitually let out for various purposes. Finally, after a fifty years' occupancy of the Pall Mall house, the lease expired and the Crown resumed possession. Mr. Christie negotiated for different premises, but finally in 1823 took the entire building in King street just referred to. From then until now the sales by auction have been carried on uninterruptedly on the same premises.

James Christie, jun., died in 1831, and was succeeded by his son George Henry, who had with him in partnership two sons of Mr. Manson, the famous bookseller. George Henry Christie retired from the firm in 1863, and was succeeded by his son, another James Christie, who also retired in 1889. Meanwhile Mr. Thomas H. Woods, until

recently head of the house, had also been taken into partnership, and on the death of Mr. Christie, the firm was further increased by the introduction of Mr. Taylor, Mr. W. Agnew, and Mr. L. Hansen. Properly speaking, there is now no member of the founder's family in the firm, nor has there been since the one last named; but Christie's it always has been, and always will be, for it is the name on which this great reputation of the house was built.

In 1891 the premises, which had been practically reconstructed in the interior, owing to the various alterations from time to time, were embellished by a new and handsome exterior, the entrance now being by a magnificent pillared portico, which gives on to a spacious hall and a very wide, imposing staircase. The lofty and elegant octagonal principal sale room is a copy of one built in the Adelphi by Adam, and the rostrum is that originally used in the Pall Mall house. It is a superbly carved structure of great value, as it was the work of Chippendale. The ivory hammer used at the sales is also the original one of ancient days, and is prized and guarded as a precious heirloom. It may be mentioned that although catalogues can now be had for the asking as at ordinary sales, originally Messrs. Christie charged a sum of half a crown for them, doubtless as an additional means of keeping out undesirables.

Viewing the rooms when no sale is taking place one might imagine one's self present at an exhibition of an art gallery as the pictures for sale are hung in artistic order, with due observance to correct light, and the porcelain and other valuables are arranged in a series of handsome show cases. The rooms are open all the year round, every day, with the exception of the principal shooting season, namely from early in August to about the middle of November.

Generally speaking, there are from two to four auction sales held per week. Saturday, from time immemorial, has been more particularly reserved for paintings and drawings, as that, of course, is the day when members of the Houses, Stock Exchange men and merchant princes have the best opportunity of attending.

All sorts of things pass under the hammer, comprising estates, residences, jewels, plate, pictures, porcelain, statuary, and curios; and it is curious to note—if one is familiar with faces of leading men—what a representative gathering is brought together when any special articles are being offered. Cabinet Ministers, members of the Houses, judges and great lawyers, collectors and connoisseurs, wealthy city men, society—represented by both sexes—artists, art editors, and gentlemen of the daily press, together with commission agents and deal-

ers—many people who are really in want of articles, and others who are drawn thither out of mere curiosity.

As a rule, perfect silence is preserved, the bidding being by brief nod or holding up of catalogue, as the prices advance by guineas or upwards; but occasionally the production of some famous picture or rare art curio is the signal for a burst of applause when the lot is placed on the sale easel or stand, and if it is finally knocked down for a very exceptional price, a perfect roar will greet the fall of the hammer. The value of property which has been knocked down at Christie's year by year would almost baffle the powers of calculation, and the business has been drawn from all parts of the kingdom and from many places abroad.

Christie's priced catalogues, which have been carefully preserved furnish a record of fabulous prices obtained for a great number of consignments, but it must at once be conceded that the sum paid may not, and does not, always represent the intrinsic value of the article sold. Very much must be allowed for the continual change of circumstances and fashions. For instance, porcelain vases which a hundred years ago or more would fetch perhaps £20 the pair would now run into hundreds or even thousands, and paintings, as is well known, are liable to great alteration in value. A work which a living artist may sell for anything from a hundred to a thousand pounds, may command a much higher figure after his death. And very much must always be allowed for associations. If a celebrity dies and his effects are offered, extravagant prices are often paid in order to secure possession, quite regardless of the actual worth. In short, prices always deviate in accordance with the passing mania of the day, although the works of the great masters are always now sure of a high figure.

Sometimes the competition is exceedingly keen, and this is no new feature of Christie's sales. In 1874, a member of the house of Rothschild and Lord Dudley each deputed an agent to attend a sale at which a pair of Sèvres china vases was to be offered. Each of the millionaires was most anxious to obtain the porcelain, and it would seem that they did not put any limit to price, for the two agents soon left the general public behind, and kept outbidding each other until the sum of £8,000 was reached, when the vases were knocked down to Lord Dudley. The intrinsic worth of these was about £600.

Another instance is quoted, also in connection with one of the Rothschilds, who, wishing to purchase a certain painting about to be put up to auction, sent his agent to secure it, but the work was knocked down for a very large sum to a rival bidder. When the agent waited upon the principal a few days afterwards, he was asked if he had brought the

picture safely home, but told his patron that it had fetched such an enormous price that, not thinking it worth the money, he had not bought it. "Sir," said his lordship, "I did not say anything about the price; I told you to buy the picture. It was your duty to buy it, even if you and your opponent had remained bidding for it until Doomsday."

The sale of Gainsborough's "Duchess of Devonshire" in 1876 drew a very large representative audience to Christie's, and the work of art was put up amidst much suppressed excitement, many of those present having come prepared to bid to quite respectable sums. But the head of the house, as soon as the work was brought forward, intimated that he had an important announcement to make; then, amidst breathless silence, he said that he had received an offer of £10,000, this magnificent sum, in fact, having been wired from Paris by Lord Dudley, truly a remarkable starting bid. When the auctioneer asked the question, "Any advance on this offer?" Mr. Agnew at once made an offer of 10,000 guineas, and the picture was knocked down to him. It will be remembered that this beautiful painting was mysteriously stolen soon afterwards while being exhibited in London, and was only recovered after a considerable lapse of time in America.

The famous Bernal collection was, perhaps, the very finest brought under the hammer at Christie's; not altogether because it was so large, but for the reason that every article was absolutely perfect. Ralph Bernal was for many years Chairman of Committees of Ways and Means in the House of Commons, and he seems to have spent a great deal of his leisure time and a considerable sum of money in forming the collection. He died in 1854, and the sale of his treasures took place eighteen months afterwards, and lasted several days, the total sum realized being nearly £68,000.

A much larger collection, also sold at Christie's, was that of the Duke of Hamilton, the works of art, cabinets, crystals, etc., chiefly from Hamilton Palace, fetching the remarkable sum of £387,562. Amongst famous relics sold at these rooms may be mentioned the "Shakespeare Cup," which was thus described by a writer of the period: "The much-famed cup, carved from Shakespeare's mulberry tree, lined with and standing on a base of silver, with a cover surmounted by a branch of mulberry leaves and fruit, also of silver-gilt, which was presented to Mr. Garrick on the occasion of the Jubilee at Stratford-upon-Avon." It was sold early in the nineteenth century by Mr. Christie, who addressed the assembly, adjuring them, "by the united names of Shakespeare and Garrick to offer bidings worthy of the occasion." The first bid was 100 guineas, and it was knocked down ultimately for 121 guineas to Mr. Johnson, of Covent

Garden. Another important sale of the last century was of the art treasures belonging to Charles Dickens, these being removed from his residence near Rochester for the purpose. Taking at random the total of any one sale one may find that a collection of pictures which was not quite five days in selling realized the handsome sum of £89,000 odd; while a porcelain sale which covered but one day shows the remarkable total of £40,856.

The records of Christie's have in them much of real romance, for the daily press has frequently recounted the finding of paintings, pieces of china, or antique furniture in the homes of people who are not at all in affluent circumstances, or in the shops of those who may be termed general dealers. A connoisseur may be casually looking round these business premises and discover some treasure, which he secures as advantageously as possible, and it presently finds its way to Christie's, where it fetches a sum which would have meant wealth to its former owner.

A quite recent case in point will be within the memory of many readers. An oil painting had hung for many years in the little hall of a small dwelling, with very little notice or special care taken of it. But there was a case of illness in the family, and the visiting doctor, himself somewhat of a judge, was irresistibly attracted to the painting in question. The owners did not at all think that it was valuable, but under the doctor's advice they consented to send it up to Christie's. The member of the firm who received it from a relative of the family gave a somewhat cautious opinion, but promised to include it in the next picture sale. This was accordingly done, and the owners of the work were electrified and overjoyed by the receipt of a wire from Christie's announcing that the picture had fetched 9,000 guineas! A few weeks previously a ten-pound note would have been gladly taken.



Fortunes in Advertising.

BY HENRY HARRISON LEWIS IN SUCCESS.

It is almost as good as a *reminiscence* to read the true story of how Gerhard Mennen, the poor German emigrant, became a mighty force in the commercial world through the force of advertising. There are also stories of how *Ureola* Broude came to the front, besides many other interesting tales of success through advertising.

SOME day a clever artist, wise beyond his generation, will draw a new allegorical conception of Success. It will not be a scantily-clad figure of a woman with golden hair floating in space and distributing favors from a clumsy-looking cornucopia, but a gray-bearded man with spectacles and a bulging forehead scattering an infinitude of microbes shaped something like dollar marks. This will typify the inoculation of fortune by the germ theory, and will be scientific, if not pretty.

There is apparently no other way of explaining the marvellous results achieved by some men under the most ordinary circumstances. In the year 1871, for instance, a great many immigrants reached this country from Europe. Among those who worked their way across the ocean on sailing vessels was a German lad of fourteen, who was promptly swallowed in the human vortex that even then represented the metropolis of the country. The manner in which he shed the habits of his former home and began to climb the gently sloping ladder of prosperity offered him by America need not be described in detail.

Six years after his arrival, during which time he had served an apprenticeship to a druggist, and studied the profession himself, he counted his little hoard of savings, and found that he had just enough to buy the good-will and scanty stock of an obscure drug store in Newark. It did not matter to the young man that no one had been able to make the store pay. He cheerfully took the risk, and, through the practice of small economies and a clever method of attracting customers, made his venture moderately successful.

At that time there were several drug stores in Newark, and a great many scattered throughout the country, but it seems that the scientific old gentleman with his microbes found only one bit of fallow ground in that particular field. The ground was so fallow that in a comparatively short time the people in and about Newark began to observe the commercial activities of a certain young man in the community. It was the druggist who had disproved all theories by making a poor business pay.

In compounding his drugs it seemed that the chemist in question did not limit his work to the mere dispensing, but every now and then did a little experimenting. He tried the effect of one preparation and another, and finally hit upon the idea of a powder that seemed to offer much better results for certain uses than the unsatisfactory chalk preparations then employed. He did not tell many people about it until he had secured the approval of expert physicians and nurses. Then he began to sell it in his store under the name of Mennen's Borated Talcum Powder.

It was at this psychological moment that the microbe began to exert itself. Other chemists had invented preparations of various kinds, from the beginning of the profession, and chemists are inventing preparations all over the country to-day. It wasn't so much the invention of the borated talcum powder by Gerhard Mennen that started him on the broad way to success as the fact that he realized one particular and absolute truth. He figured it out this way:—

"Success has three component parts. One is the article, which must have undoubted merit; the second is opportunity, and the third can be described as *x*. Now, I have the article, and I think I have the opportunity, but it is necessary to define *x*."

He glanced from behind his counter at a woman who had paused in front of the window. She looked at the articles exposed for sale, walked on a few steps, then hesitated, and finally returned to the window. After a moment she entered the store and bought a box of talcum powder. Gerhard Mennen got more out of that particular sale than the price of the box. He found his *x*.

Exposing the boxes of powder in the window was advertising in its primitive form; exposing more boxes in more windows was increasing the advertising; and, finally, exposing the name with the portrait of the maker in a multitude of magazines and other mediums meant a degree of advertising that brought a fortune to the little German boy who had worked his way to America not many years before. There is not the slightest doubt in the world that Gerhard Mennen's success was due to the persistent advertising of a meritorious article. Advertising alone did not do it, nor was success due entirely to the merit of the article. Both were necessary.

It is said on good authority that Gerhard Mennen's widow was offered a million dollars for the business not long ago by a Boston syndicate. Fifteen years ago, when the first output was placed on sale, its valuation could not have exceeded one-hundredth of that amount. It would not be worth much more to-day if Mennen's shrewdness and firm-

sightedness had not caused him to convert every spare dollar of profit into printer's ink.

Menken was what might be called an ideal advertiser. He had ideas of his own, and they were valuable, but he knew his limitations in that line, and did not hesitate to enlist the services of others, trained experts in the advertising profession, who were able to utilize to the utmost extent the possibilities of his products. When the talcum powder was first exploited in ink a photograph of Edna Wallace Hopper was used in the advertisements, but it was soon pointed out to the manufacturer that a better trade-mark could be made of his own portrait. He followed the suggestion purely as a business proposition, and to-day his features are almost as well and widely known as are those of the President of the United States.

Menken's principal virtue as an advertiser was his absolute fearlessness. He did not hesitate to increase his appropriation each year, and, if it came to a question of a new shingle on his factory roof or a new advertisement in a proved medium, the advertisement always won. The roof could wait, but the public's education in the matter of talcum powder could not. His success is all the more remarkable because it cannot be said that his line of advertising struck the popular fancy and was given free publicity like "Spotless Town," "Sunny Jim," or the "Gold Dust Twins."

The last, for instance, has been used broadcast over the country in political campaigns. There is something quaint and peculiarly attractive in the two little darkies, and the story of their creation is another story of success from clever advertising.

It is an odd circumstance that the article called "Gold Dust," a washing powder, was on the market some time before the twins got hold of it. The earlier pictorial advertisements of this product showed a woman struggling under a load of washing apparatus. The twins appeared on the scene as volunteer assistants to the woman. Then came the inspiration to let them do all the work themselves, and forthwith the woman vanished, making way for an advertising trade-mark that has reached a valuation of more than a million dollars.

Quaker Oats furnishes a similar instance of an advertising hit made long after the first sale of a product. The producers of Quaker Oats have been extensive advertisers for years, but it was not until October, 1902, that they hit the popular fancy with their six-word line, "The Smile That Won't Come Off." Here is an all-illuminating phrase which demonstrates the value of a "catch-line." The big Quaker, with his somber yet kindly face, had done his work. He had helped to make a place for

the "grandfather of breakfast foods," but it was finally realized that no had served his purpose, and that something additional was needed. In casting about for a new device particular stress was placed upon the necessity of humor. Advertisements of foods must be light of touch and pleasing in fancy. The idea of utilizing a series of faces, each wearing a smile inspired by the toothsome of Quaker Oats, was suggested and immediately adopted. Its success was assured from the beginning, and the firm manufacturing the food has reaped a harvest of dollars from its continuous advertising.

In telling these little stories of how fortunes are made by advertising I have endeavored to prove one important fact, which is that an article must be equal in value to the price at which it is sold if success is attained. In securing the material for this series I did not find one single instance of prosperity made on a basis of bluff. On the other hand, in the great majority of cases, the product advertised was of more intrinsic value than would have been possible without advertising. It seems as if the different manufacturers felt that it was necessary to "make good" when they proclaimed the merit of their products to the world.

This fact inspires a word on the evils and unfairness of substitution, a subject intimately connected with advertising. Substitution, in this case, means the offering of an article "just as good" by a merchant for one asked for by the customer.

Not only are there manufacturers who do not advertise, but there are also those who do not hesitate to utilize the advertising of their competitors as much as possible. Every successful article, made successful by merit and advertising, has been imitated. If "imitation is the sincerest flattery," as we are told, the fact remains that the firm initiated in business does not appreciate the flattery, and, moreover, the public at large is not at all benefited. Proof confronts you on every hand.

Take the soda cracker, for instance. Dealers can be found to this day who do not hesitate to offer you a soda cracker from a barrel when you ask for "Uneeda Biscuit."

"It costs less, and is just as good," they tell you. Then they add that sycophantic and well-worn argument, "The makers of this soda biscuit do not advertise; they put that money into the goods."

There is no greater fallacy.

The National Biscuit Company, manufacturing the Uneeda Biscuit, and many other similar products, has spent millions of dollars in advertising during its few years of existence. How it began to manufacture

and to advertise offers an object lesson to those who believe such an argument as that mentioned above.

One summer day, six years ago, an advertising agent made a little journey from Philadelphia to Chicago, with the intention of inducing an organization known as the National Biscuit Company to adopt a systematic plan of advertising, which the company had failed to do until that time. The agent found the man at the head of the company willing to listen.

"The proper foundation upon which to build a great business is to make a good article and advertise it so widely that the consumer will demand it of the dealer," said the agent.

"That is true," agreed the manufacturer, "but there must be something else with it. We must have, if we are going to manufacture a soda biscuit, for instance, the best soda biscuit that has ever been made, and even that is not enough; it must be put up in a new kind of package—one that will keep it as good as we send it out."

This determination meant a great deal of trouble, and a great deal of expense, but the men forming the company went to work and persevered until they had perfected the biscuit and also discovered a new method of packing that offered the results for which they were looking. The question of a satisfactory name for the new product was not so easily settled. Some word, or happy combination of words, was needed. The advertising agent suggested a number, and the manufacturer suggested several, and finally, by the process of elimination, the word "Uneeda," which happened to be among those mentioned by the agent, was selected.

And now, equipped with the proper article, a satisfactory method of packing, and a catchy title, an advertising campaign was inaugurated. The result of that campaign is well known to you. The word "Uneeda" starts at you from the pages of the leading magazines, from the billboards of all the principal cities, and from the columns of the daily press. Go where you will, or at any time, you cannot escape the suggestion that you need a biscuit. In the case of the Uneeda Biscuit, substitution only serves to emphasize the fact that the advertised article is far better than that which is sometimes offered in its place. But substitution, nevertheless, is an unfair and entirely unsatisfactory proposition for the consumer.

A study of the art of advertising—for it is an art—leads one to the belief that it is productive of a great deal of good. I have shown that it has increased the intrinsic value of innumerable products necessary for our welfare, and that it has cheapened the cost to the consumer. It also

has materially assisted in the broadening and upbuilding of the modern newspaper, and it is almost entirely responsible for the twentieth century magazine of low price and wide circulation.

It is a well-known fact that the average magazine could not be published if its income was limited to the money received from sales. Probably not one in twenty receives enough from subscriptions and newsstand sales to pay for much more than the white paper it uses. The average ten-cent publication sells to the trade at less than six cents a copy; the majority of the popular ten-cent monthlies cost more than ten cents a copy to manufacture and circulate. The difference, added to the profit made by the publisher, comes from the advertiser. The argument is plain: if manufacturers and merchants did not advertise, the enlightening influence of the modern magazine, and a multitude of products necessary to the well-being and the comfort of the modern consumer, would not be possible, and the upbuilding of fortunes in trade would be the rare exception instead of almost the rule.

If space were given me in these columns to compile a list of the important concerns owing their wealth and prosperity to advertising it would require many pages of the publication. Thus far I have mentioned the following: The New Idea Pattern Company, the Star Safety Razor, the Prudential Insurance Company, Sapollo, Mellin's Food, the Ingersoll Dollar Watch, the Eastman Kodak Company, Mennen's Talcum Powder, the National Biscuit Company, the Gold Dust Twins, Quaker Oats, Sunny Jim, the Regal Shoe, and the Heinz Pickle Company, simply as a few shining examples of the great value of advertising.

The combined capitalization of the companies concerned can be reckoned at not less than a quarter of a billion dollars. It is safe to say that not one of them would have succeeded beyond the value of a local trade if it had not been for persistent and clever advertising. Yet these fourteen concerns represent only a small percentage of the fortunes won by the free use of printer's ink.

There have been failures in advertising. Success does not perch upon the banners of every man who attempts to win prosperity through the aid of the public prints. A valueless product can not be forced upon the consumer, nor is it possible to achieve satisfactory results through a haphazard and badly directed campaign of advertising. I quote the words of Earnest E. Calkins and Ralph Holden, well-known advertising men:—

"Advertising is a force whereby a keen-eyed man, controlling a desirable output from a great factory, secures for it the widest possible

market by utilizing every form of publicity and every method of making an impression upon the public; who watches its sales on the one hand and its publicity on the other; who, like an intelligent broker, keeps a constant and thoughtful hand on the pulse of the market, knows exactly what his advertising is accomplishing and what it is failing to accomplish, knows where to strengthen it and where to weaken it, and who, considering the entire country as a whole, adapts his advertising to each locality, pushes his products where such products may be sold, and leaves uncultivated the places where no possible market may be made. He knows something of salesmanship, of the law of supply and demand, a great deal of human nature, and the best method of appealing to it.

"Such a man, realizing that there are in this country so many mouths to be fed, so many hands and faces to be washed, so many bodies to be clothed, so many feet to be shod, makes a breakfast food, a soap, a brand of clothing, or a shoe, and he launches out boldly, feeling that his particular article is the best, and remembering that just as long as people continue to be born and grow up there will be more mouths, more hands, more feet, more bodies, and more faces; and, until the sun of human wants be changed, there will be the same steady demands and needs. He then proceeds to find means for making his article in every home and in every mind a synonym for something that will supply these wants, which indicates that he realizes, to its fullest extent what a mighty engine is advertising."



George Westinghouse, Genius.

BY A BUSINESS ASSOCIATE IN AMERICAN INDUSTRIES

An excellent prospectus of the inventor of the airbrake, showing how he writes the genius of the inventor with the executive ability of the promoter, and the knowledge of the manufacturer. The many interests of the head of the Westinghouse Electric Company are set forth in a readable manner.

ONE of the most interesting characters in the industrial world to-day is Mr. George Westinghouse. In this age of wonderful achievement his name stands in the first rank in at least three great fields, as an inventor, as an organizer and active manager of great industrial enterprises, and as a financier. Mr. Westinghouse possesses in an eminent degree those qualities that have characterized the great military commanders in the world's history, and he has carried into the realms of invention and manufacture the same masterful spirit that has won the great battles of the world. He may indeed be called a general in the industrial world, for he is to-day the active head of an army of mechanics numbering almost thirty thousand. He personally directs the affairs of at least twenty-three manufacturing institutions located in six different countries. He is assisted by scores of able lieutenants in every factory, but his is the master hand that controls one of the greatest chains of industries that the world has known.

Power is the word that describes both the man and his work. The man is a power in physique, in thought, in action. The work, too, centres chiefly about power—its generation, its application and its control.

Few men have been more active than Mr. Westinghouse, and still fewer have had the foresight and courage that have characterized his activities. He saw the need for an improved brake for railroads and invented one. Then he organized a company and began its manufacture. On account of its universal use the air brake is perhaps better known than any of Mr. Westinghouse's other inventions. It revolutionized railroading and has contributed more than any other agency to the safety, comfort and speed of travel. His railroad experience taught him that further development was needed in signalling, so he organized The Union Switch & Signal Company.

He early recognized the wonderful possibilities of electricity and began making experiments. Then he formed a company for the manufacture of electrical apparatus. The direct current system of generating electricity had too many limitations, and his keen foresight saw the possibilities for a much broader field in the alternating current system;

so in the face of many adverse conditions and despite the protests of his warmest friends he undertook its development. The wide application of the alternative current system to-day and the many achievements that it has made possible attest the soundness of his judgment. Though but nineteen years old, the Westinghouse Electric & Manufacturing Company is to-day one of the largest manufacturing institutions in the world. The floors of the main factory alone would cover a good-sized farm.

Natural gas was discovered in the Pittsburgh district. Mr. Westinghouse foresaw its commercial possibilities and organized a company for its development. Then he began the manufacture of gas and steam engines. Gas meters were needed, and he formed a company and began their manufacture. He found improvements could be made in water meters, so he entered upon their manufacture as well.

The Tarson steam turbine was attracting attention in England, so he went over and secured the rights for its introduction into America. Europe needed electrical and braking apparatus, so he organized companies in France, England, Russia and Germany. The factory of the British Westinghouse Electric & Manufacturing Company, at Manchester, England, is almost as large as the one in East Pittsburgh. Canada began to show signs of increasing activity, and a company was organized and a large plant built upon Canadian soil. Dr. Nernst, the German scientist, had invented a new light. Mr. Westinghouse saw its possibilities and began its development in America. Then Mr. Peter Cooper Hewitt brought out a mercury vapor lamp and Mr. Westinghouse formed a company for its development.

The story of the Westinghouse air brake is one of the great stories of American achievement. A friend and lieutenant of Mr. Westinghouse has written that his first invention was a successful railroad frog, and that it was while exploiting this and studying railroad problems that his attention was drawn to car brakes. His first idea was of a steam brake, but his knowledge as an engineer showed him that condensation would make this a failure. It was the successful transmission of power by compressed air at the Mount Conis tunnel, then under construction, that gave him the germ of his air-brake idea. The first air brake was crude, though wonderfully effective compared with anything that had gone before. Later he perfected it by the invention of the triple valve and of the setting of the brakes by releasing the pressure in the train-pipe, so that, as now used, the brakes throughout a train act simultaneously.

The invention and perfection of the air brake was a great achievement for human progress and in itself would have stamped Mr. Westinghouse as one of the men of the age. This man differed from many

men of great inventive genius in having an executive and financial ability equally great. Others, most men perhaps, would have failed to secure the recognition and adoption of the new air brake, or would have been obliged to see the fruits of their work gathered by shrewder business men. Mr. Westinghouse having made his invention, made his fight for his invention, and it was superbly successful, although it was made against bitter opposition on the one hand and cold indifference on the other.

The history of the Westinghouse Electric Company is of the same order, and it is an illustration of the character of its founder in the same way. In the electrical field Mr. Westinghouse, although one of the first explorers, has been from the first less an inventor and more of a business man, able to see the value of the inventions of others. He purchased the United States rights to the Gaulard and Gibbs alternating current patents and immediately became the father of alternating current machinery. It has been said that electricity must have remained forever a comparatively inefficient and impracticable agency except for the use of the alternating current. And yet there was an even fiercer fight against the adoption of his alternating current machinery than there had been against his air brake. In this case there were important financial interests against him, and not merely, or chiefly, the inertia of indifference and ignorance. He had to fight the makers of direct current apparatus. One story is that the opposition to the Westinghouse machinery was so keen that the New York electrocution apparatus, the first adopted, was equipped with a Westinghouse dynamo at the instance of his enemies, the idea being that this would be convincing proof of the deadly nature of the alternating current.

It was at this stage in the development of electrical machinery that Mr. Westinghouse and Mr. Nikola Tesla came in contact. The alternating current needed a practical and simple motor to make it commercially feasible in a large way. Mr. Tesla had the idea, far from perfect at first, and he convinced Mr. Westinghouse, who became his friend and financial backer. There was a long period of waiting and of expensive experimenting, but the business genius was so much an inventive genius himself, and perhaps also so much a genius in the knowledge of men, that he did not lose faith. Finally the motor was perfected and all the world knows the result—a machine that is used all over the world in plants run by electricity, a machine which has been described as being "as simple as a grindstone, of the highest efficiency, and almost fool proof."

No other business in the world, probably, has grown so rapidly as this Westinghouse Electric & Manufacturing Company at East Pitta-

burg. The present works of the company were built only ten years ago. At that time there were two main buildings 750 feet long, one 230 feet wide and the other 100. Nearly everyone in the business world who came in contact with Mr. Westinghouse then believed that these buildings were vastly larger than there would ever be any use for. Since that time more and more buildings have been added. In 1890 there was an extension at one end; in 1900 at the other; in 1901 the space between the two was utilized for another building 1,200 feet long. Then finally began the duplication of the entire plant.

To direct the affairs of all the twenty-three Westinghouse companies scattered throughout the world requires a man of great force and activity. Mr. Westinghouse is all activity and he makes his activity count. He is not only active as the head of these different companies, but he is active in mechanical research as well, and the working out of the ideals that find their inception in his brain keeps no small force of engineers busy.

The solid foundation upon which this general of industry has established his many institutions, and the upright and straightforward business policy that has characterized all his undertakings, have won for him the respect of the business world. The generous spirit which he has always manifested towards his associates and employees, and the high consideration which he has always shown for their welfare, have won from him a degree of esteem that a king might envy.

It goes without saying that Mr. Westinghouse's great genius, foresight, activity and ability to overcome obstacles have been the means of producing for him great wealth, but there are few to whom wealth in the abstract means less than it does to him. To him it is but the medium that permits the unbounded exercise of his genius, and the loss of it would concern him only in that it would limit the possibilities for his genius to expand and develop. Mr. Westinghouse is not a man who could turn his holdings into cash and rest upon his laurels. He has always been active and his nature will permit nothing but activity. That which he has already accomplished entitles him to a place among the notable men of the age, not only in America, but in the world; and greater things than he has yet accomplished may still be expected from so masterful a mind as his, for he is only fifty-nine years old, young for the man of achievement.

James R. Keene Reads the Future.

BY WILLIAM GRIFFITH IN NEW YORK TIMES SUNDAY MAGAZINE.

The great financier discusses with the interviewer the results of the Russo-Japanese War, the position of the trusts and the speculative system. His advice to all and sundry is to stay clear of stocks, save for investment purposes. The interesting personality of the horseman-financier is cleverly painted in the concluding paragraphs.

PROSPERITY is reasonably sure to remain ever with us for some time to come, if the prophetic vision of James R. Keene be a reliable touchstone. Gently but firmly crossing lances with no less a champion than he of Standard Oil, the Ivanhoe of the Street, as the eminent market master is admitted to be, sees no reason to believe with John D. Rockefeller that the tide being now at the flow, there is liable to be a sweeping ebb within the next two or three years—unless the country be stricken with agricultural paralysis, which he deems improbable.

It was in his apartments at the Waldorf-Astoria that the veteran financier, victor in many historic campaigns, and victim of some, voiced his opinions of the industrial and financial situation, and incidentally analyzed the trust question with a keenness compatible with his name.

His outspoken candor in discussing the vital financial and industrial problems of the day is of added interest as contrasted with his habitual reticence. For, in the phrasing of the President, it is, and has always been, with deeds rather than words that James R. Keene is most deeply concerned. His attitude toward what he terms the garrulous axe-grinding actors and critics of finance is one of passing impatience.

Twenty-eight years in metropolitan finance have left Mr. Keene grayer of hair and with a frostier beard than when he returned as an Argonaut from California in 1877 to challenge such lions as Jay Gould, W. H. Vanderbilt, Cyrus W. Field, and Sam Ward in their dens. Physically wiry, tending to slenderness, and of medium height, there remains of him the same impression as a thoroughbred, tense, virile, and of indomitable stamina, often conveys. He wore a neat-fitting cutaway coat, trousers of a modest pattern, and no flash or twinkle of jewelry. Even a slender watch chain was three-quarters in eclipse. Only once or twice was his even-tempered voice raised above a conversational tone, and then, wishing to emphasize a word, or italicizing a point, his words came in sharp, crackling volleys, and the steel-gray eyes were fired with burning intensity.

"Never in my recollection," he began, "have the prospects been more

flattering for the country at large than they are to-day. And, while the prosperity of the American farmer is the corolla of the situation, there are many flourishing points, among which might be mentioned the re-establishment of peaceful relations between Russia and Japan and our tremendous industrial activity."

"What effect, approximately, will the restoration of peace have on this country, in a financial sense?" was ventured.

"Well, it seems very probable that a large portion of the money which both Japan and Russia will find it necessary to borrow in order to revive their semi-paralyzed industries will come from us. To-day Japan has some \$50,000,000 on deposit here—money subscribed to her last loan, and which she has not yet touched—and that will soon be taken out of the country. But it is only a fraction of what the Japanese Empire will need for her rehabilitation. And Russia is no better off financially, indeed, not as well off, if we are to believe what is generally credited. In view of the immense volume of money both countries will find it necessary to borrow, and in view of our ability to lend it, it is certain that within a very short time many millions of money will find their way out of this country to Japan and Russia. As a slight indication of the Russian attitude toward us," continued Mr. Keene, "there was the removal yesterday of her tariff differential against our steel products and machinery. While that is only an incident, it indicates very clearly that Russia realizes our value to her in a financial way, and M. Witte, while here, doubtless received assurances of financial support in return for this concession."

"Of course," was quickly added, "we must not forget that certain industrial benefits have accrued to us directly through the war now so happily ended. Both countries have for the past eighteen months suffered a temporary industrial paralysis, and we have benefited thereby. Japan has throughout the campaign practically fed her immense armies with American products, other than rice and a few staples of Japanese growth. And, to a certain extent, the same may be said of Russia."

"When you mention wars and trusts in the same breath as being deplorable, do you offer a criticism of modern industrial combinations, Mr. Keene?"

"In one way, yes; in another, no," was his reply. "A trust, properly managed, would be an ideal institution. By an ideal institution is meant an institution capable of conferring the greatest benefit upon the greatest number of people. I do not go so far as to say that we are even within speaking distance of such a millennium, for we undoubtedly are

so. And the principal, the only, reason we are not is identical with the fundamental cause of every war—human nature."

"Trusts, so-called, as conceived and operated in this day and age, are not utopian dreams; there is nothing philanthropic about them. They are business institutions conducted on business lines, with an eye to profit and to nothing else, for stockholders. If consumers could reap the benefits commensurate with the economies made possible by these large combinations, then the hatred and opposition to them which breaks out so frequently would end."

"It might be possible, though not probable, for a trust to be so conducted as to reduce the cost price of its output to the consumer without any reactionary ill, for the simple reason that a combination is able in innumerable ways to economize in the cost of production. But at present our large corporations are so enormously capitalized that every nerve of their respective managements is strained to pay an adequate dividend on their respective capitalizations."

"And," continuing, "another bad feature of our enormous industrial corporations is the deplorable tendency to destroy, or vitiate, our mercantile independence as individuals. It is my firm conviction that the day is coming when the individual small merchant will cease to exist. In his place will be millions of persons working for wages and salaries, whereas yesterday and to-day they were and are proprietors. In other words, I believe the time is coming when practically all mercantile and industrial affairs will be conducted by corporations."

"And are there any offsetting benefits to be derived from the inevitable system?" was asked.

"Yes, the cloud is not without a silver lining," was his prompt reply, "and one beneficial phase is the ability of a large corporation not only to locate but to create a foreign market for its products over and above what is consumed at home. But it is doubtful if any benefits can fully offset the loss of individual proprietary independence."

"Thus far," added the eminent critic, "the country, with its industrial wealth increasing annually and quadrennially by leaps and bounds, has steadily grown up to what would otherwise have been the distinct and dangerous overcapitalization of certain larger existing corporations. Just how long our assimilative powers will stand up under the tax is a matter of conjecture. But there certainly is no reason to make any gloomy forecasts for the immediate future when we are annually pocketing \$2,500,000,000 for cereals alone. The American farmer, in other words, was never more prosperous than he is to-day, and so long as the American farmer is prospering there is no ailment which this country cannot throw

off or assimilate. Our farms constitute the backbone of the country, and there is a steady and distinctly noticeable increase in the agricultural returns from year to year, in the quantity produced as well as in the market price obtainable.

"Wheat, corn, hay, nearly all agricultural products are bringing more per bushel or bale from season to season, while gold is being produced in such abundant quantities that the purchasing power of a dollar is gradually but perceptibly growing less and less, against a gradual increase in property values."

"And Wall Street?"

"Is being benefited along with the rest of the country, though it has undergone a marked change in the past twenty years," replied Mr. Keene. "In what essential?"

"Well," with deliberation, "what is true of the general industries of the country is true of Wall Street—the tendency toward combination is everything. Whereas there were possibilities a decade ago for an individual operator in the Street, the individual is now so completely overshadowed by combined interests that he who opposes them must court inevitable disaster. In other words, with the advent of so many enormous combinations, having behind them such masses of capital, it is vastly more difficult for any individual, however powerful, to control or even seriously influence a market situation. Yes, the complexion of affairs has changed very radically. There is not so much out-and-out speculation as there was once—the people, the classes of them who formerly speculated, are now seeking solid, dividend-earning investments, and are satisfied with a reasonable return of 3 or 4 per cent. Or they are patronizing outside bucket shops scattered over the country."

Questioned about the effect which such recent exposures as attended the United States Shipbuilding collapse and the Equitable ventilation have had on Wall Street, the famous leader of many sorites preferred to leave it unanswered. His diagnosis of the Shipbuilding case was as simply a matter of overcapitalization, with perhaps a touch of recklessness, which had made its collapse a foregone conclusion. Otherwise the subject was too complex and infinite to permit of loose discussion.

Mention of Thomas W. Lawson provoked an impatient dismissal of the Boston iconoclast as neither meeting nor receiving serious consideration from thoughtful people of unbiased opinion.

"Looking back over your extended connection with Wall Street," was ventured to the eminent financier, "what is your advice to persons of ample or of average means who may contemplate a career there?"

"My advice," he replied gravely, with a word-to-the-wise expression,

"is incorporated in the reply of Punch to one who contemplated matrimony—don't. Ninety-five per cent. of those who embark on venturesome careers in Wall Street come to grief. Now that the question is up, I may go further and say that the only way for any one to enter there is on a legitimate business basis. Any other course not only squeezes a person dry physically, mentally, and financially, but it leaves him unfit for any safe and sane career in other directions. One might say in addition that in order to be successful in speculation an extraordinary aptitude for studying, analyzing, and judging correctly both national and international industrial indications, as well as a thousand other complexities entering into the case are necessary. And it is doubtful, everything considered, whether the game is worth the candle, even under fairly favorable conditions."

Such was his message to outsiders, and an extraordinary message enough, coming from such authoritative source. Asked if he were not bothered by the army of seekers after inside information, the serrated campaigner lightly tossed the subject aside; and therein undoubtedly lies the secret of his power. He is the sphinx of the Street, or is so recognized, mysterious, unwearying, and inexorable toward opposition. Also he is undoubtedly the most picturesque and stalwart figure in the modern pits and pens a quarter century ago. Needless to say his life story reads financial arena. Scarred with conflict and with undimmed courage, he is, as before pictured, as vigorous and alert as when he first bearded the like a romance—teaching a lesson of perseverance and pluck. How he came to this country when a boy, went West, became a reporter, miner, millionaire, and speculator; how he came East to Chicago and absorbed additional millions; how he came to New York and lost a fortune; his struggle to regain it; his feuds with the controlling powers in the market; all this is too well-known to need repetition. He has never known when he was beaten, and perhaps this is the reason why he remains a dominant personality in the financial world.

Briefly speaking, he belongs to no clique. You never hear his name truthfully associated with any coterie. Nor is he affiliated with any bank. He is a director in possibly two corporations—the Westchester Racing Association and vice-president and steward of the Jockey Club. He is a member of no pool, unless it be one of his own creation. In other words, he is the one man in the financial district big enough to stand alone, the free lance, the Ivanhoe, a clearly outlined, solitary figure, feared by consolidated interests controlling their hundreds of millions.

Strange to say, this James R. Keene has never been a member of the Stock Exchange. But he has, it is frequently vouchsafed, bent it,

the greatest power in the money world, to his hiding more than once as though it had been a chamber of commerce in an ambitious country town.

Again and again he has turned its floor into chaotic pandemonium and set the hundreds of brokers bowling around the posts, and yet, it is said, he has never been within its doors. Nevertheless, it appears that numberless owners of \$50,000, \$60,000, and even \$80,000 seats are but pawns in the epic game he plays.

What are his methods? Ask any one versed in the traditions of the street and such a one will whisper that Keene were not a Keene if anybody knew. Yet few men can converse better or more forcibly when he wants to talk. And there is no man who would better impersonate a statue of silence when it behooves him to say nothing. He does not let his right hand know what his left hand does. How and when he distributes his orders, who his brokers are, no one can tell. They are as bubbles in the current. Not being a member of the Stock Exchange, he makes no trades in his own name. His brokers are frequently changed. One man may have selling orders from him and another orders to buy, yet neither may know that the mysterious edicts come from the same source.

All the arts of finance are known to him. He can conduct a still hunt in such a manner as never to awaken a shadow of suspicion. Long ago he became known as the one noiseless man in the Street. Contrarily, he can manage a campaign with the alarm and fanfare of a champagne bottle, be it but necessary.

Yet he is not a creator. His name has been but vicariously associated with the promotion and upbuilding of railroads or stellar industrial properties. He is essentially a speculator—a financial engineer below decks. He has reduced his business to an art, for science it can hardly be termed. While the legitimate value of one security or another may afford him an excuse for being a bull or a bear on it, he is too accurate a judge of market conditions to be influenced by these factors alone. Like all who have become blue or gray in the service of the ticker, he knows the import of technical conditions—who is doing the buying and selling and the backing thereof.

And so bears his three-score-odd years with feathery ease. His Reaumur-gray eyes twinkle with the youth that refuses to acknowledge age. They can be now inscrutable and frigid, and then burn with anger that is Homeric when occasion warrants, but the youth is still there.

At his comfortable retreat at Cedarhurst or in his Waldorf apartment or with his horses he is kindly, genial, approachable. At his broad street office it is another story—the story told by the ticker. Gen-

erally he arrives there by 10 in the morning. Unless he visits the race course he remains there until late in the afternoon, and often until 6 at night. During the day a hurried dictation, a rapid signature, condensed telephone conversations, and then always—the ticker.

Slipping the tell-tale tape between his fingers or with his hands a-grip behind his back, with his keen gray eyes fixed as on vacancy upon slag ever and again at the tape, he paces to and fro with the sinewy tread of a panther ready to spring.

This is not the quiet, genial personality familiar to many who watch him watching the negotiation of a classic event at the track, nor is it the man you see at the Waldorf chatting and laughing with a favored few. This is a Keene playing the game that he loves and yet would have others avoid as a plague, playing the game for the sake of winning it rather than for the millions it may yield.

Certainly such a character presents curious contradictions—from the ticker to the turf. Is there a better known patron of racing in America? He has owned some of the greatest race horses in paddock annals. His Foxhall, winner of many French and English classics, was acclaimed the horse of a century. His Domino, winner of more apoplectic purses than any horse of his day, was the speed marvel of several seasons. His Symby is considered by the best judges as the greatest horse now running in this country. And yet with all the horses that have borne the Keene colors, with the magnificent stable he reviewed the other day, this trader who has won and lost millions with equal nonchalance, has seldom been known to bet a dollar on a horse.



A Night in a Travelling Post-Office.

BY MARCUS WOODWARD IN PEARSON'S.

Here we are given a graphic description of a journey from London to Carlisle on the Down Night Mail Special of the London and North-Western Railway. It is a journey fraught with exciting incidents, and the author has caught the wild spirit of the thing and has written with a dash and vim that makes his story one of absorbing interest. To one unacquainted with British post-office methods, the article is most instructive.

EIGHT o'clock in the evening at Euston Station. At a humble, out-of-the-way platform, a long train, gay in its colors of white and chocolate, is drawn up. So quietly it waits on its side track that few give it a passing thought. Yet it is, perhaps, the most wonderful train in the world.

It is the famous Down Night Mail Special, the world's premier mail train, a train that runs three hundred miles in six hours and eighteen minutes, though half-an-hour is spent in stoppages. Leaving Euston at 8.30 p.m., it comes to Carlisle, after rushing down the thirty mile descent from Shap Fell at seventy miles an hour, at 2.48 a.m. And as it flies through the night to the North, letters are caught up from the ends of the kingdom, to be swiftly sorted by the post officers, who are the only passengers, and scattered again, farther north, to their destinations.

Postal work on the flying office begins long before the train starts, and does not end until one portion has arrived at Glasgow, another at Aberdeen, and a third at Edinburgh. From the start to the finish of its three hundred mile journey up the great trunk line, the special is in ceaseless connection with other trains from the ends of England, forever picking up new mails, and dispatching sorted mails.

It receives letters from Penzance and the Channel Islands, it passes letters on to Ireland, to Wales, to the extreme North of Scotland, and to the ultimate Hebrides. A chart of its course and its connections would appear like a great spider's web laid out over the British Isles—the main lines that unite the outer circle of the web to the centre standing for the trucks of other T.P.O.'s, or travelling post-offices, flying eastward or westward to exchange mails with the north-bound special, and flying again on their way. The total number of letters that are received nightly on the down special, to be sorted and dispatched—apart from direct bags of sorted letters that merely have to be carried from town to town—amounts to about one hundred thousand.

By eight o'clock the train is almost in readiness for the start. Sort-

ing has been under way a full hour. It only remains to receive the last van loads of letters.

The great scarlet, two-horsed mail-vans follow one another in a clattering procession to the platform. Horses are pulled on their haunches swung round at right angles to the train, and backed until the van's wheels are square on to the platform, and porters and packers fall upon the mail-bags and the parcel-baskets, and shoot them into the train.

The scene becomes exciting; mail-vans arrive at a gallop, amid shouts, and banging, and rattling. From the smaller offices, one-horsed carts dash up with their quota of letters, while little, swift tri-cicle carriages follow with letters that have missed the cart dispatch.

At 8.27 the last cart bows up with a budget of unsorted letters from Mount Pleasant, the great London office for the inland mails. At 8.29 arrives a man in a red coat, like a huntsman's—one of the mail porters, who bears a bagful of late-fe letters, on which an extra halfpenny has been paid for the privilege of last moment collection. The engine-driver, his steam fully up, peers from his cab, expectant for the starting signal.

"All right?" inquires the railway company's foreman of the mail officer in charge of the platform—an official in dark uniform with black lace on his cap, in whose care are the sporting-looking mail porters.

"All right?" asks the mail officer in his turn of the inspector of the mail train—"Then—right away." The foreman gives the signal, we spring for the train, and the platform goes gliding past.

I am armed with a special permit from the Secretary to the Post-office, giving me the rare privilege of travelling with the mails. Also I carry a first-class return ticket from London to Carlisle, given to me by the London and North-Western Railway chiefs as a token that they approve of the enterprise. But to-night I am free from ticket-inspectors and all the conventionalities of railway travel. My ticket, representing the essence of luxurious travelling over the best-laid line in the world, seems to wear an ironical grin as I examine my train.

The train is made up of a dozen heavy coaches or vans, specially designed for post-office work; letter and parcel sorting vans, stowage vans, and two breaks containing the only two seats provided for the railway guards at either end. The engine-driver, the stoker, and the guards represent the railway company—the thirty other workers in the train represent the post-office, and every one of them is hard at work before the train has left the platform.

"Our first receipt of mails is made by apparatus at Harrow," remarks

Mr. Inspector Pinfold, as the train gathers way and London slips behind us. "Come and see the apparatus."

We push our way past the workers in the letter-sorting carriage, who block the narrow gangway between the pigeon-holes on one side and the rows of mail-bags hanging on the other side, to the van where is worked the apparatus for receiving or dispatching mails while travelling at full speed. A man leans on an iron bar across a wide open doorway gazing into the night. As we near Harrow, suddenly he springs to attention—he has caught sight of some landmark that tells him the train is approaching the point where mail-bags are to be picked up. He works a lever in the carriage that causes a great, square-cornered net, hitherto pressed flat against the outside woodwork, to open out beside the train. "Stand back," he cries. There are two sharp metallic clicks, and two leather pouches hurtle on to the floor at our feet.

"The mail-bags are inside the pouches," explains the inspector. "You see, the net contains a strong angle-rope, shaped like a V on its side. Beside the line is a standard or gallows, from which the pouches are hung just so that the rope shall catch them. The impact releases the spring that holds them in place, they drop into the net, and thence rebound into the carriage.

"It is very simple, yet it is a great idea, since the appliance allows us to pick up mails when travelling at seventy miles an hour. It is just as simple to dispatch the mail-bags at top speed. The man in charge of the apparatus fastens the bags in their pouches to an upright arm outside the carriage. The arm he lowers outwards and downwards, so that the pouches are suspended in the air. A net, just like the one we carry, is fitted up beside the line, and when our pouches swing into its angle rope, the shock causes them to drop from the arm, and we pass serenely on our way so many letters the lighter."

The men who work the apparatus have received a special and curious education. They have learnt the line. At any point of a journey, by day or night, they could tell you their exact whereabouts from the distinctive sound of the roar of the train.

Some men can tell where they are at any moment from the difference in the smells wafted in through their doorway. The roar of a tunnel will give a man his bearings; the music of a bridge, crossed or passed under; the echo of the train's roar as it passes a brick or wooden wall; or the pistol-like report caused when the train rushes by a signal-cabin near the line. The train sings a song to these men all through the night, and every note has a meaning. Their eyes are as sharp-tuned as their

ears, and where the night is a black wall to eyes untrained, they pick out familiar landmarks that tell them their whereabouts. Snow and fog are their chief enemies, deadening sound and changing the aspect of the landscape.

After Harrow, the mails come in by apparatus thick and fast, and the loud thud of the falling pouches is continually heard, as the nets catch the mail-bags out of the night, and shoot them on board. There are receipts at Watford, at Boxmoor, where the letters from Hemel Hempstead are gathered in, at Berkhamstead, Tring, Leighton Buzzard, at Bletchley—where the heaviest receipt of all is made, twenty bags flying into the train—at Wolverton and Weedon, and so on, until the train draws up at Rugby, at 10.08 p.m.—on time to the second.

Here a heavy mail is put on board—a score or more of bags coming in from the Eastern Counties, to say nothing of forty or fifty baskets of parcels.

In four minutes the train is under way again; and the inspector now suggests a walk through from end to end, to see the work in all its branches. He explains the organization of the staff, and how the men are drafted from point to point in the train, as the work of the various departments grows heavier or lighter. The inspector himself is in charge of the whole T.P.O., having beneath him a registered letter officer, twenty-four skilled letter and parcel sorters, and a small staff of porters, who receive and dispatch the mails.

The sorters are picked men from the London postal service, who have been passed by a doctor as fit for withstanding the strain of six hours' continual mental and physical work at high pressure. On joining a T.P.O. they begin by learning apparatus duty, spending two months in becoming thoroughly acquainted with every foot of the line. Eventually they learn sorting duties, beginning by handling the newspapers since a mis-sort with a newspaper is of less importance than with a letter. In time they blossom into letter-sorters, and finally may become overseers of the mail, or even inspectors.

In the beginning they are classified as "men below the bar," and their wage starts at £68 a year, to rise to £112. When they cross the bar, from a yearly salary of £112, they may rise to one of £160. These men receive in addition a special allowance for every trip they make.

The mail special is arranged on a geographical plan. Next to the engine is a brake destined for Aberdeen, carrying one of the guards, and containing all the direct mail for places on the line north of Carlisle.

Passing through this brake, we come to an Aberdeen parcel sorting-

van, where the sorters deal entirely with Scotch parcels. The work here grows heavier as Scotland is approached. In August, when the shooting begins, the parcel post becomes enormous. But at any time it is a wonderful sight to see the men picking up the great baskets filled with parcels, emptying the parcels on to a table, and throwing them back to the baskets again, this time in order, as swiftly as a pack of cards might be dealt.

So soon as the parcels are sorted into their right baskets, they are carried through into the next van, reserved for stowage—for every inch of space is of value in the sorting carriage.

In the next carriage half-a-dozen sorters are at work, sorting letters and newspapers destined for Scotland, sent from the ends of the earth. Though the parcels come to the T.P.O. in a wholly unsorted condition, the letters are sorted beforehand to a certain extent, each bundle having on it a label which denotes the particular division in the T.P.O. to which it must go.

Of every bag of letters received and dispatched a complete record is kept—and each man knows exactly what bags he should receive, and what dispatch. So wonderfully perfect is the system, that if a sorter mis-sorts any one of the hundred thousand letters dealt with nightly—if he puts a letter into a wrong pigeon-hole, or a parcel into a wrong basket—when the mistake is eventually discovered, his fault can be traced at once to him.

Registered letters are safeguarded by a system of hand-to-hand checking, so that every officer who handles them must give and receive a receipt.

How swiftly and accurately a man can sort his letters depends a good deal upon his mood. A clever sorter, whose brain is working well, whose hands move with his brain, and who has no worries on his mind, will sort seventy letters in a minute—picking up each off a table, glancing at its address, and deftly tossing it into one of the fifty-four pigeon-holes that confront him. But to sort forty letters a minute is good work.

Continuing the tour of inspection, the next van carries parcels for England that must be sorted between station and station. Thus the basketfuls of parcels put on the train at Rugby must be cleared off by the time Tamworth is reached, at 10.46 p.m., where a junction is made with the Midland mail train from Bristol to Newcastle, bringing bags from the far West of England and from South Wales. Then at Tamworth a connection is made with the far East, and parcels come on board from Lincoln and the East Midlands.

Work on this van goes forward at high pressure. The men at the sorting table cry out the name of the basket into which each parcel must be thrown, and the parcel is handed down a chain of men until it arrives at its proper receptacle. The cries of the sorters rise in a babel—"Liverpool! Carlisle! Warrington! Liverpool! Manchester! Manchester!" Parcels fly from hand to hand, and as the sorting table is cleared fresh baskets are passed down to the table over the sorters' heads. It is a scene of strenuous excitement; but as the train draws in at Tamworth the last basketful of sorted parcels is being fastened down.

The remainder of the long train is made up of another stowage carriage, which becomes, after Carlisle, a sorting carriage for Glasgow parcels—a brake van with a guard, a railway man who sorts the company's official letters, sent from station to station, and two vans with parcels and letters for Manchester and Liverpool, to be detached at Crewe and Preston.

At 10.51 p.m. Tamworth is left behind, having contributed its quota of mail, and we have a clear run before us to Crewe, where we are timed to arrive at 11.43. Hard on our trail, only a quarter of an hour distant, comes the Irish mail. We shall hand it some five thousand Irish letters, and in turn shall receive letters from all parts of the kingdom, for Crewe is the most important railway junction in England.

As we run into Crewe, over the largest set of lines in the world, the inspector draws a map of England, showing the connections we shall make with other travelling sorting offices, as distinct from the ordinary trains that contribute their loads of letters. Here we meet the Bristol, Shrewsbury, and York T.P.O., to whom we hand such mails as we failed to dispatch at Tamworth by the Midland mail. We receive bags from Jersey and Guernsey that have not been touched since they were sealed at St. Heliers. We receive mails from North Wales in exchange for our sorted letters, while mails from numberless towns in the Midlands await us. A busy ten minutes for the porters and packers is passed at Crewe.

At midnight we are off again, to Warrington and Wigan, where the apparatus is worked; on to Preston, where picture-post-cards from Blackpool pour in upon us, and where the Liverpool tender is shed; on to Carnforth, reached at 1.30 a.m., where we have another large receipt from the Midlands, from Sheffield, York, and Newcastle, and where we take in a bag from the Midland T.P.O., southward bound—and so into the region of mountains.

England is slipping rapidly behind us. At Carnforth we feel a breeze from the sea, only four miles distant; but the picturesque little

town, and the granite, fern-covered rocks of the district, and the bracken and gorse, can only be imagined, for night still reigns, though day breaks in these regions half-an-hour earlier than in the south. Now the engine—for an additional one has been attached at Preston—perceptibly slackens speed as they begin the toilsome climb of thirty miles to Shap summit! But we have thirty miles on the down grade before us by way of compensation. As we drop over the mountain-top and begin the downward rush, the magnificent engines are let go at top speed, and it is at seventy miles an hour that we descend from the clouds into Carlisle.

It is 2.48 a.m. The tired staff vacate the train, handing it over to the Edinburgh T.P.O. staff. The worn-out sorters will soon be asleep in their beds. When they rise at mid-day they will be free to devote their afternoon to enjoyment; they have their swimming, cricket, and football clubs at Carlisle, and they will return to London on the 8.42 p.m. up limited mail, and the 9.22 p.m. special, working their way.

Meanwhile we go to bed at Carlisle, in the dim grey dawn, to dream of a fire-breathing dragon rushing and roaring across the world, swallowing up great mouthfuls of letters and parcels that fly by magic to meet it, and to feed it, from the ends of the earth.



Shopping in Paris.

BY MRS. JOHN VAN VORST IN PALM MALL MAGAZINE.

The keynote of French merchandising is to study the mental attitude of the shopper. While the British and American systems are commercial, the French system is psychological. Incidentally the author gives some characteristic pictures of the Parisian merchant and his store. A section devoted to Paris fashion and how they are set is full of interest.

THE whole plan of shopping and shops in Paris might be traced back to the Middle Ages, when all trading was done in the open market-place.

Just as there is a "market day" once a week in every small village throughout France, so there still are in Paris the flower-market, the bird market, the ham market, the rag market, the stamp market . . . and in the ordinary shops a concentration of trade according to its nature.

For example, were one to lay out a "shopping map" of Paris, one would find that, with certain exceptions, the dressmakers and jewellers are assembled in the Rue de la Paix, the milliners are in the Faubourg Saint-Honore, the antiquity dealers in the Rue Lafayette, the Rue de Provence—while the articles de Paris are on the Avenue de l'Opera and the Grands Boulevards.

Each quarter has its own magasin de nouveautés, such as the Louvre, the Bon Marche, the Trois Quartiers, the Printemps, where, not as much as at the London stores, but to an almost unlimited extent, everything can be bought.

Thus, as on the old market-places, to-day in the Rue de la Paix, the lady shopper who does not find what she wants at Doucet's need seek only a few steps farther, at Worth's, at Paquin's, at Raudnitz'. . . . If it be letter-paper, fancy picture-frames, porcelain ornaments, bronzes statues, Parisian or cosmopolitan bric-a-brac she is looking for, she may wind her way up the Avenue de l'Opera and along the Boulevards, where she will see a bewildering display of novelties.

The centre of the old curiosity shops was originally the Hotel des Ventes or Government auction-rooms to the Rue Drouot. Thence, little by little, the trade in antiques has radiated, reaching even across the river to the Rues de Seine, de Rennes, des Saints Peres, and the Quai Voltaire.

Behind the Palais Royal, in the Rues du Caire, du Mail, d'Anjou, are collected the stores where feathers, artificial flowers, glass heads and pinnate meretricious trappings are sold both retail and wholesale.

of the kind they require, and their selection fixes the mode for that season.

"The tradition that French women set the fashions is fast becoming a legend. French women, I regret to say, are losing their knowledge of how to dress well. You have only to go to any fashionable gathering where Parisiennes and American ladies are to be seen side by side, and you will at once perceive that the latter are far the better dressed. There is not the slightest doubt about that, and I am quite willing to be quoted in the matter."

Before the Americans so intruded into the domain of dress, the stage was a more powerful means of setting the fashions than it is to-day. But even now, to launch a new style a firm occasionally avails itself of the theatre; still, when possible, there is no doubt that preference is given to society women, who are only too glad to wear new creations to the races at Longchamps or to Chantilly, to the Salon or to the Concours Hippique. As a great society leader is sure to be much observed and talked about in the public prints, her dress, if it pleases the public, will be copied. It generally takes two seasons firmly to establish a new fashion.

Most of the houses are well patronized by the lights of the Parisian stage, although Sarah Bernhardt has found a way to dispense with them by establishing an atelier de couture, or dressmaking department, in her own theatre.

The achievement of a finished and well-defined style is usually a slow process. If one could get behind the scenes of a large Parisian dressmaking establishment, he would see a number of mannequins—as they are called—exceedingly pretty, slender-waisted girls, walking slowly and majestically backward and forward before a number of men and women, heads of the firm, the designers and leading employees, who examine them with critical eye, making them turn this way and that in order to take in, from every point of view, the dresses in which they are attired. The designers' creations are thus critically examined and discussed. Suggested changes are made and the process of inspection repeated until everything is declared satisfactory. Sometimes customers will suggest a modification in an existing style which takes the firm's fancy, and is adopted in making dresses for others.

There is another source of inspiration for the fashion of the day, and that is the historical one—reference to the past history of fashions and of style.

Redfern, for instance, admits frankly that he gets many ideas for new fashions by studying old fashion-prints. He is a good example of the class of dressmakers which evolves the new from the old. M. Bonchot,

the curator of the Cabinet des Estampes at the Bibliotheque Nationale, or Great National Library of France, says that some time before each season large numbers of milliners and dressmakers come to study the thousands of fashion-plates—many of them extremely rare—which are under his care. They adapt and modify the dresses of former days to suit modern taste. But it is only by the most arduous research at the great library that one can hope to discover anything new in the way of dress styles. Sometimes the artistic temperament and imagination are employed in the creation of new styles, but on the whole the dressmakers are agreed that the artist without a knowledge of the technicalities of the work is of little use to them in the creation of new fashions.

The great test of a good dressmaker is the manner in which he can dress each customer according to her individuality. Some dressmakers make fashions for the hundred, but the greatest make them only for the few. A design is often made for one individual alone, especially if the individual in question has a bottomless purse.

Worth's well-known house, now represented by two brothers, only one of whom, however, takes an active part in the business, is almost as exclusive as it was in the days of its founder. Designs here are prepared for the head of the firm by the four or five highly-paid designers who are attached to the establishment. These drawings are subsequently modified, executed in material and again modified. After being criticized again and again, they are placed before customers high in the world of fashion—Countesses, Duchesses, American women of wealth, and even Queens, for whom the dresses have been especially made.

The showrooms of these great couturiers of Paris are sumptuous apartments, and may be compared to palatial drawing-rooms. In smaller rooms, cut off from the large showroom by heavy curtains, one may see costumes upon which fabulous sums of money have been spent. Here are evening-dresses of elaborate design and often trimmed with precious stones, frequently diamonds.

These dresses are arranged upon lay-figures, and the rooms are aglow with dozens of little incandescent lights, in order to enable the customer to judge of the exact effect as seen in a hall-room flooded with electric light.

There is absolutely no limit to the cost of a ball-dress, but quite an ordinary price is about twenty-five thousand francs (five thousand dollars). The figure seems large to the general public, unaccustomed to such lavish expenditures in dress, but it must be remembered that such gowns are often of cloth of silver, with a dark corselet thickly sewn with rubies.

The process of choosing a gown to be worn on a state occasion is

also a thing to be very seriously considered, and receives as much attention from a society woman as a Minister of Foreign Affairs could give to the construction of a secret treaty with a friendly country.

With American women one of the most momentous occasions requiring a special gown is when they are presented to Queen Alexandra at the Court of St. James. There being no court in France, similar occasions do not present themselves there with a woman of such simple tastes as Mme. Loubet presiding over the Elysee. Elaborate toilettes have not been necessary even when American girls are presented at the Elysee, which is an affair quite easily arranged through the ambassador.

An American girl who is about to be presented at the English court, will, if in London, make a special pilgrimage to Paris, accompanied by her mother, to visit the establishment of one of the leading French dressmakers. Her experience will be practically the same no matter which house she selects.

With her mother she will be escorted to the special showroom for ball-dresses, where, seated on a gorgeous divan, the ladies will look on while several saleswomen spread out upon a mahogany table an array of the costliest white silks and laces obtainable.

This is a long task, and before the mother and daughter are satisfied the tables and other articles of furniture are completely out of sight under their burden of precious stuffs. Finally, when the "very thing" is revealed, the real work begins under the master eye of the great dressmaker himself, with the result that the problem of how the gown shall be fashioned is at last solved. The detail of the work is in itself an object-lesson in the art of dressmaking to the onlooker.

Those taking part in the grave council of trained experts, besides the head of the house, comprise the foreman, or first hand, at least three designers, two mannequins, in the shape of two pretty French girls with figures that a Duchess might envy, and perhaps five professional members of the staff.

Very rarely is it that a person going to order a dress of one or other of the great Parisian dressmakers has any very definite idea of what she requires, that it, as regards detail. Fashion is ruled, generally speaking, not by the customer, but by the costumer. The custom is to exhibit the latest creations of the firm by means of living models, those tall, graceful, long-waisted girls who know not only how to wear a dress well, but how to move about with ease and elegance. A particular style of dress, as seen in this seductive way, will take the fancy of a client. All that need be done to suit her taste, then, is to make a few slight alterations. Sometimes these are indeed very important, and the result is to all intents

and purposes the production of a design almost as new as if the head of the house or his manager had acted quite independent of existing models. The number of visits necessary before the completion of a "great" gown entirely depends upon circumstances. If the customer is a regular one at the house, no visit is absolutely necessary at all after the materials have been chosen and the order given for making up; for the firm is the custodian of the lady's moule, as the figure made in facsimile of her own is called. But in the case of a new customer, one other visit at least is necessary.

It has been said that the average woman is incapable of accuracy, which may account for the taking of the careful measurements necessary being always entrusted to men, who go about their work so carefully and with such precision that later on the fair society girl appears to have been moulded into the finished product. In some cases the measurements are taken over a closely fitting chambray garment.

Women are by no means of one mind about the necessity of going to Paris for style. It is pointed out that, first of all, Americans want to be free and independent of fashions that may please the French women. And it is likewise true that the manner of life of American women necessarily gives them figures quite different from those of their French sisters, who from their childhood are squeezed into corsets designed to give them unduly long waists and narrow hips. The American girl, on the contrary, shares her brother's games, is an adept at outdoor sports, and develops an expanse of chest that quite unfits her for the confines of the corset affected by the Parisienne. To further the work of emancipation of the American woman from the tyranny of Paris dressmakers, an association has been formed which has a monthly paper of its own and holds an annual convention for the exhibition of the products of American dressmakers. It is hoped and openly stated by the founders of this association that in the near future no gowns of Paris design will be comprised in these annual exhibitions, but that they will all be of domestic design and manufacture.

The Cost of Life Insurance.

BY ALLAN H. WILLETT IN POLITICAL SCIENCE QUARTERLY.

To those who take the trouble to read this article in its entirety, the idea will come that the problem of life insurance is a needlessly complicated one. The explanations given by the writer are most instructive.

THE recently published evidence of the extravagance and misconduct of the officers and directors of the Equitable Life Assurance Society of the United States has aroused the interest of the general public and directed attention to the question of the proper organization and management of life insurance companies. That an examination of the affairs of other companies in the same business will reveal practices fully as reprehensible as any of which the officials of the Equitable are accused is universally believed. There will undoubtedly be legislative investigations, and more or less wise laws will be enacted by different States for the purpose of promoting honesty and efficiency in the management of life insurance companies and safeguarding the interests of the insured. The only hope of permanent improvement, however, lies in the development of an intelligent interest in the matter on the part of intelligent people; and this interest must reach more fundamental questions than the relative merits of the mutual and the joint-stock forms of insurance funds. It will be unfortunate if the present popular interest in the subject exhausts itself on these relatively superficial and subordinate phases of the matter, and fails to reach the most important questions of all: What is the proper cost of life insurance? Are we paying an excessive price for the services life insurance companies are rendering us? It is for the purpose of directing attention to these fundamental questions and throwing some light upon them, that this paper is written.

To most patrons of insurance companies the method of determining premium rates is a profound mystery. It is safe to say that in no other field of economic activity are so many millions of dollars paid by intelligent people with so little idea of the relation between the cost of what they are getting for their money and the price of it, as are paid to life insurance companies by their patrons. This fact is largely due to the absence of a practical check upon prices which exists to a greater or less extent in nearly all other forms of insurance. The price paid for fire insurance, for example, enters as an element into the cost of producing commodities or rendering services of various kinds, and the efforts

of competitors in the same line of business to lower their cost of production leads them to put pressure upon the insurance companies for lower rates, and to search actively for the cheapest protection consistent with security. No such restraint exists in the case of life insurance. That form of insurance is in this respect in the position of a consumption good, in the purchase of which the great majority of people are far less careful to secure their money's worth than they are in the purchase of capital goods. Moreover, while the general theory of insurance rates is simple and easily understood, the application of the theory to the calculation of life insurance rates leads to very complex and intricate problems. This is partly due to the long term for which many life insurance policies run, but still more to the bewildering variety of contracts offered by the different companies. The result of the diversity of contracts is not only inability on the part of the prospective policy taker to compare the real cost of insurance in different companies, but a feeling of helplessness before the whole problem. As a prerequisite to an intelligent discussion of the proper cost of life insurance, a somewhat extended consideration of the technique of insurance and the practice of insurance companies is necessary.

The general theory of insurance rates is very simple. An insurance premium consists of two parts, known as the net premium and the loading. The net premium makes provision for the payment of indemnities for the losses experienced by the insured; the loading provides for the expense of carrying on the business. If all insurance contracts ran for a short time, as for one year, and the interest on the funds in the hands of the insurance company were disregarded, the net premium for \$1,000 of insurance would be ascertained by dividing the total amount of indemnity to be paid by the number of thousands of dollars of insurance issued. Thus if the insurance issued for a year is \$1,000,000, and the indemnity to be paid \$25,000, the net premium rate is 25 per \$1,000. If, however, the premiums are paid at the beginning of the year, and the indemnities at the end of the year, and if the company can earn 4 per cent. on the funds while they are in its hands, it would not need to collect \$25,000 at the beginning of the year, but only such a sum as, invested at 4 per cent., will amount to \$25,000 at the end of the year, or \$24,038.46, and the net premium rate will be \$24.04 per \$1,000. To this net premium must be added such an amount per \$1,000 for loading as will bring into the company a fund large enough to cover the expenses of the year. If the expenses amounted to \$10,000, the loading would be \$10 per \$1,000, and the actual premium \$34.04.

In one respect it is evident that this calculation is artificially simplified. The amount of loss which will befall a given amount of insurance is by no means fixed and known in advance, but is one of the elements of uncertainty with which insurance companies have to deal. The estimate of future loss is based upon past experience; and where that experience has shown a very fluctuating loss-rate from year to year, it is necessary for the insurance company, if it is to give security, to make a liberal allowance for the extent to which the actual loss in any year may exceed the average for a series of years. Life insurance, however, enjoys a peculiar advantage in this respect. The contingent event with which life insurance contracts deal is the death of the insured, and when enough lives are covered to overcome minor variations, the annual death-rate for each year of life is remarkably constant.

Past experience as to mortality is contained in so-called life or mortality tables. Such tables give the number dying at each age of life out of a stated number living at the beginning of that year. There have been a considerable number of such tables worked out on the basis of data derived from different sources. The ones used in the early days of life insurance were based on the experience of the general population, while those now in common use are based on data derived from the observation of insured lives. The two in general use in the United States are the Actuaries' Table, based on the mortality experience of seventeen English companies, and the American Experience Table, based on the records of thirty American companies.

Contracts issued by a life insurance company fall into two general classes; those in which the company binds itself to pay indemnities if the insured die during the term of the policy, and those in which the payment of indemnities is contingent upon the survival of the insured to the end of a stated term. The former are known as life contracts, the latter as endowment contracts. The two are frequently embodied in the same policy. In general use the term "endowment" ordinarily refers to a combined life and endowment contract.

If all life insurance were paid for on what is known as the natural premium plan, i. e., if the payment made by each insured at the beginning of each year were intended to cover only the mortality loss and the expense of that year, the calculation of life insurance rates would be as simple as the example given above. If, for example, a person of age 30 proposed to insure his life for one year in a company which used the American mortality table, and which assumed an income of 4 per cent. from its investments, the net premium per \$1,000 insurance would be

ascertained by discounting for one year at 4 per cent. an amount sufficient to pay \$1,000 to each person dying during that year of life, and dividing the result by the number living at the beginning of the year. According to the table, out of 854 people who enter age 30, 7 die before they reach 31. Hence the premium rate would be ascertained by dividing \$7,000, discounted at 4 per cent., by 854, or \$7.88 per \$1,000. To that net premium must be added the loading, the due share of the expense of carrying on the business for the year. If the same person desired to continue his insurance another year his premium rate would be calculated in the same way, and would amount to \$7.85. For the third year it would be \$8.01. And as the ratio of those dying during any year of life to those living at the beginning of that year steadily increases with advancing age, the amount of the net premium for a year's insurance would increase *pari passu*.

Such a method of apportioning the cost of insurance is known as the natural premium plan. There are no theoretical objections to it, but a very serious practical difficulty arises from the advancing cost of insurance. In old age that cost becomes practically prohibitive.

A second method of paying for life insurance is by means of a single premium for a term of years, paid in advance. Such a premium for three years' insurance would be calculated as follows: According to the American mortality table out of 854 persons entering the 30th year of life, 7 will die during that year, 7 during the next year, and 7 during the third year. A company which has insured 854 people of age 30 for \$1,000 each must pay out \$7,000 in indemnities at the end of the first year, \$7,000 at the end of the second year, and \$7,000 at the end of the third year. Discounting these amounts for one, two and three years respectively at 4 per cent. compound discount and adding the results, we find that the present worth of the risks assumed by the company is \$19,425.63. That is, that amount in hand at the beginning of the period, invested at 4 per cent. compound interest, will yield enough to pay the indemnities as they fall due. If this is divided by 854, the number living at the age of 30, the quotient, \$22.75, is the amount which the company would need to collect from each of the insured. This is known as the single advance premium. This form of contract is comparatively little used in life insurance, but is very prevalent in fire insurance, where three, five and seven years' insurance are frequently paid for in advance. By continuing the process of discounting indemnities for later years the single advance premium for any term of years, or for life, may be ascertained.

The insurance for life may be regarded as insurance for a term of years, the term running to the end of the mortality table.

The most prevalent method of paying for life insurance is by means of a uniform annual premium. This premium may be arranged to run for any number of years not exceeding the term of the insurance. The amount of the annual premium may be ascertained by finding how many dollars a man must promise to pay each year for the desired number of years, if living, in order that his promise may be worth as much to the company as the single advance premium for the same kind of policy. Thus in the example just used the single advance premium was \$22.75. To change this to a level premium payable for three years, the following method might be used. Find the present value of the promise of a man 30 years old to pay a dollar a year in advance for three years, if he lives. The first payment may be counted at its full value, since it is virtually cash in hand. The second payment, however, must be discounted in the first place for the uncertainty whether the man will live to pay it. As at the beginning of the second year only \$47 out of the original 854 persons will be living, the company will receive \$817 when it is promised \$854. When it is promised a dollar, therefore, it will receive \$0.96. And even this amount will be received only after the lapse of a year, and to ascertain its present value it must be discounted for one year. The result is \$0.93. The present value of the promise to pay \$1 two years from date, if living, may be ascertained in the same way. As there will be only 840 survivors out of the 854 persons, the company will receive only \$840 when it is promised \$854, or \$0.98 for every dollar promised; and this amount discounted for two years becomes \$0.91. The sum of these three amounts, \$1.00, \$0.93 and \$0.91, or \$2.86, is the present value of the promise of a man aged 30 to pay a dollar a year in advance for three years if living. The single premium payable in advance for three years' insurance was found to be \$22.75. If the company is to accept from each of the insured a conditional promise of a certain amount at the beginning of each of the three years in lieu of the single advance payment, and if the present value of such a promise to pay \$1 is \$2.86, it will be seen that the necessary level premium may be ascertained by dividing \$22.75 by \$2.86. The result is \$7.95, and the level premium must accordingly be \$7.95. Insurance paid for by equal annual premiums is said to be issued on the level premium plan.

It is unnecessary to show in detail how the same method may be applied for any term of years or for life. Moreover, there is no necessity that the term of insurance and the term of premium payments should

be the same. Twenty years' insurance or insurance for life may be paid for in ten, fifteen, or twenty equal annual premiums. When the premium term is less than the insurance term, the policy is known as a limited payment policy. Thus we have limited payment life insurance and limited payment term insurance. It is evident that the shorter the term of premium payments, other things being equal, the larger each annual payment must be.

The method of calculating net premium rates for pure endowment insurance differs in no essential respect from the method already described. The chief difference is that the amount of indemnity to be paid by the company is dependent upon the number living at the end of the endowment period and not on the number dying during the term. Thus if 854 persons at age 30 take out 20-year pure endowment policies of \$1,000 each, the American mortality table shows that at the end of 20 years there will be 608 survivors. The company will have to pay indemnities amounting to \$608,000. By discounting that amount for 20 years at 4 per cent. compound discount, and dividing the result by the number living at the beginning of the term, the single advance premium of \$373.02 is obtained. That can be changed to a level premium for any number of years by the method used with the life insurance premium. If the policy is combined life and endowment policy each premium is computed separately, and the sum of the two is the required premium. Nor need the life insurance and the endowment insurance run for the same term of years, but, as is sometimes the case, the endowment insurance may terminate at one date and the life insurance continue to a later date or for life.

In the early years of a level-premium life policy, whether a straight life or a limited-payment life policy, and throughout the term of an endowment policy, the company is accumulating out of the net premiums a reserve on the policy, which is generally recognized to-day as the property of the policy-holder, held in trust by the insurance company. In the case of a level-premium life policy the reserve arises from the excess of the actual premium of any year over the natural premium for the same year, increased by the interest earnings. The reserve on such a policy increases every year from the beginning of the policy up to a point somewhere near the middle of the term, when the increasing natural premium becomes equal to the level premium. After that point is passed the company credits itself each year with so much of the reserve on the policy as is necessary to make up the difference between the natural premium and the premium the company is receiving. In this

way the entire reserve is used up in paying premiums by the end of the term of insurance. On the policies of the insured who die before the reserve is thus exhausted the company is a gainer by the entire amount of the reserve at the time of death, since the natural premiums of the entire body of policy-holders are sufficient to pay the losses of the group. With a limited-payment policy the process is the same, but the reserve accumulates more rapidly during the early years of the policy, reaches a higher amount at its maximum, and is used up more rapidly during the later years, when the insured is paying no premium.

In the case of a pure endowment policy the reserve consists of the entire net premium increased by interest earnings. If a policy-holder dies before the end of the endowment period his reserve is apportioned pro rata among the survivors and helps to make up the endowment indemnities of the group at the end of the period. It is a mistake to talk about endowment insurance as a pure investment. The holders of pure endowment policies who survive to the end of the endowment period derive a profit from the forfeited reserves of those who die before the end of the period, in addition to the interest earnings on their own premium payments. Over against this, however, must be set the cost of administration, covered by the loading added to the net premium, and the question of net gain or loss to the survivor turns upon the relation between these two items. In the case of ordinary endowment policies, which are in reality life and endowment contracts, the whole matter is further complicated by the accompanying life premium which the survivor pays during the whole period, and for which he receives no money return. These premiums have paid for his "protection" during the endowment period, i. e., they have been used to pay the death indemnities of those who died during the period.

The reserve on a policy is the legal property of the insured, carried on the books of a company as a liability. When an indemnity becomes due through the death of a policy-holder, the loss inflicted upon the company is not the full face of the policy, but that amount minus whatever reserve the company is carrying in the name of the policy-holder. During the life of the policy-holder this smaller sum constitutes the net amount at risk on the policy, and at his death it measures the net mortality loss of the company. During the early years of a level-premium life policy this amount diminishes as the reserve increases, while during later years it increases as the reserve diminishes, and becomes again equal to the face of the policy when the reserve is exhausted. In the case of a pure endowment policy, on the other hand, the net amount

at risk steadily diminishes as the reserve increases. At the end of the endowment period the reserve is equal to the face of the policy. The maturity of endowment policies, in other words, imposes no loss upon the company.

In nearly every State of the Union a life insurance company is required by law to have an excess of assets over liabilities equal to the accumulated reserve on all its policies, as calculated on the basis of a mortality table and a rate of interest specified in the law. Hence this reserve is frequently called the legal reserve. Any additional assets of the company constitute the surplus, the property of the company, to which no individual policy-holder has any legal claim, except so far as a share in it may have been properly placed to his credit upon the books of the company. If a company desires to transfer an insurance contract to another company during the term of the insurance, it must transfer at the same time the accumulated reserve on the policy, as without it the second company could not afford to accept the contract. Hence this reserve is often referred to as the re-insurance reserve. While a company possesses net assets equal to the reserve on all its policies it is a solvent company, since it can at any time reinsure its risks and retire from business.

From this examination of the method by which net premium rates are calculated, it is obvious that so long as the different companies use the same mortality tables and the same assumed rate of interest they must reach the same net rates for the same kind of policy. No such uniformity is forced upon them in the matter of loading, the addition made to the net premium to cover the cost of carrying on the business. As a matter of fact, however, there is little difference between the companies in this respect. The loading is calculated as a certain percentage of the net premium, and while there are minor differences for different kinds of policies, the average loading in life insurance is about 25 per cent. of the net premium, or 20 per cent. of the total premium.

If the mortality experienced by a life insurance company and the rate of interest earned on its funds correspond exactly with the mortality and the interest rate assumed in calculating net premiums, and if the loading for expenses yielded only enough to cover the actual cost of carrying on the business, the insured would be getting their protection at cost price. In the case of a stock company normal interest on the capital actually invested would have to be included as a part of the expense. As a matter of fact, however, the mortality actually experienced by nearly all companies is very materially below the assumed

mortality, the interest earned on investments is considerably in excess of the assumed interest, and in economically managed companies the expenses of management do not exhaust the income from loading.

From any or all of these sources the company may receive a surplus income. This extra income is at the beginning the property of the company. In the case of a stock company it may be utilized in any one of three ways. It may be distributed among the stockholders as dividends on stock, it may be returned to the policy-holders, or it may be retained in the possession of the company. When the dividend rate of a stock company is limited by law or by charter, only a definite part of the surplus income can be used in the first way. The rate of dividend in different stock companies varies widely. Thus, of the twenty-one stock companies reporting to the Minnesota Insurance Department in 1904, six companies, with an aggregate capitalization of \$4,150,000, paid no dividends in 1903; seven, capitalized at \$1,365,000, paid 7 per cent.; one, capitalized at \$1,000,000, paid 8 per cent.; four, capitalized at \$4,350,000, paid 10 per cent.; two, capitalized at \$325,000, paid 12 per cent., while the Manhattan, capitalized at \$100,000, paid 16 per cent. The average for the companies paying dividends was 8.81 per cent., while for all companies it was almost exactly 6 per cent. It must be noted, however, that in some companies the nominal rate of dividend is no indication of the rate of return on the actual investment. Thus the Prudential has so increased its capitalization of stock dividends that its nominal rate of 30 per cent. represents a return of 219.78 per cent. on the capital actually paid in in cash. The remainder of the surplus income, or profit, of stock companies, and the entire profit of mutual companies must be used in the second or the third method. It is necessary to consider briefly each of these methods and its results.

What proportion of the surplus income of the year shall be returned to the policy-holders and what part shall be retained by the company, is arbitrarily determined by the company itself. It was formerly the custom of many companies to carry a fixed proportion of the surplus income to the permanent surplus account and to distribute the remainder among the policy-holders. The result was a fluctuating rate of dividend to the policy-holders, and this fluctuation was found to cause both distrust and dissatisfaction among the policy-holders. The nearly universal practice now is to determine the dividend rate first, and to fix upon a rate low enough to allow of a gradual increase from year to year. When this increase has gone as far as seems desirable, a new minimum rate is selected, and the process of gradual increase begins again. The question

of the most equitable method of apportioning the surplus income among the policy-holders is one which has received a great deal of attention from insurance experts. In the early days of life insurance crude methods were adopted, such as dividends in proportion to premiums. The present method, known as the contribution plan, is much more scientific and equitable. According to that plan the share which each policy holder receives from the surplus income is made proportional to his contribution to that income. A detailed description of the method would require an undue amount of space. The remainder of the surplus income is carried to the surplus account.

On annual dividend policies dividends to policy-holders are paid annually. On deferred dividend policies they are more or less formally apportioned annually by the company, but are paid only at the end of the deferred dividend period, usually five, ten, fifteen or twenty years. Many so-called deferred dividend policies are in reality semi-tontine policies, with a contract providing that if the insured dies or allows his policy to expire before the end of the dividend period, he shall forfeit the accumulated dividends on his policy, which shall be carried to the credit of the other policy-holders in the same group.

Such policies are falling into deserved disrepute and are in direct violation of sound insurance principles, introducing an additional element of uncertainty into a business whose one purpose should be to eliminate uncertainty. The claim sometimes put forward that they tend to equalize the cost of insurance by taking from those who die early, and so pay few premiums, and giving to those who live long and pay many premiums, is based on an entirely erroneous conception of the principles of insurance. The premium pays for protection, not for the indemnity. In the case of level-premium life insurance so far is it from being true that those who die early ought to be taxed for the benefit of those who live long, that they are the very ones who are paying an excessive price for their protection, measured by the excess of the level premium over the natural premium at their age.

The funds left in the hands of insurance companies by holders of deferred dividend and semi-tontine policies are in a somewhat anomalous position. It seems to be the legal rule that when these funds have been definitely apportioned by formal act, and each man's share placed to his credit on the books of the company, the title passes to the policy-holder; but where the funds are carried as an undivided deferred dividend reserve, the individual policy-holder has no legal claim to any share of it. At the same time, in the State of New York, where a special tax is

imposed upon the surplus of life insurance companies, the companies insist upon calling this reserve a liability, and their claim has been allowed. In this connection it is interesting to note that during the year 1903 the following companies reported a reduction of this deferred dividend and special reserve fund to the extent indicated: Mutual Life, \$5,954,379.45; New York Life, \$2,557,000.24; National Life, \$21,967.49; Prudential, \$216,215.05. The relatively small reductions in the case of the National Life and the Prudential might easily be brought about in the natural course of business. The presumption that the other companies used the funds for other purposes than those for which they had ostensibly been set aside is strengthened by the fact that in spite of dropping these larger amounts from the liability side of the ledger, the business of the year showed a net loss in the case of the Mutual, while the New York Life came out exactly even. Not the least objection to the deferred dividend form of policy is the fact that it increases unnecessarily the funds in the hands of the insurance companies, and leaves a wide margin of available resources at their disposal.

That part of the surplus income of the year's business, which is not credited as dividends either to stockholders or to policy-holders, is carried to the surplus account. The net surplus of a company consists of the excess of the assets over all liabilities including its legal reserve. The life insurance companies reporting to the New York Insurance Department showed a net surplus on December 31, 1903, of \$167,795,982.59 in addition to "special funds," in which were included deferred dividend and untimed reserves of \$151,000,074.58. The possession of a surplus is undoubtedly an aid to a company in securing business, giving it an appearance of stability. This probably explains why the Equitable publishes to the world a surplus of over \$70,000,000.00, while claiming before the New York tax department that its real surplus is a little over \$10,000,000.00. It is difficult, however, to see any adequate reason for its existence in an old established company under existing conditions. Insurance authorities justify it as a safeguard against either one of two contingencies: a mortality in excess of that indicated by the mortality table, or a fall in the rate of interest below that assumed in calculating net premiums. How slight the probability is that either of those events will occur, will be evident when we study the actual experience of the companies.

After a company has accumulated a surplus, interest on such surplus is an item in its income account. When the premium income plus the interest on the reserve is sufficient to meet all liabilities and keep up the

legal reserve, the interest on the surplus is all profit to the company, swelling the surplus income to be distributed at the end of the year. In practice, however, the reserve and the surplus are not kept distinct, but the income from all the invested funds of the company is compared with the interest necessary to keep the reserve up to the legal requirements, and any excess in the amount realized is carried to the profit of the company.

In calculating the net investment income many life insurance companies and insurance departments attempt to divide the total expense of the year into two parts, the insurance expense and the investment expense. The insurance expense is then charged against the loading, and the investment expense against the interest account. In practice one result of this method of book-keeping seems to be to enable a company to increase its insurance expense up to the full amount of the loading.

The appreciation or depreciation of securities and of real estate is the source of considerable gain or loss to an insurance company on account of the large funds it has invested in such property. This item does not appear in the annual reports given to the public by the life insurance companies themselves, and is rarely found in the reports of the State Insurance Departments. It is an item of general interest to the public and ought to appear plainly on the balance sheets of the company.

One more possible source of gain or loss to an insurance company remains to be noted. Nothing has been said as yet about the effect produced upon the financial condition of a company by the premature withdrawal of policy-holders. Nearly all life insurance companies now pay a certain sum in the form of cash or of an equivalent amount of extended or paid-up insurance to any of their policy-holders who fail to keep up their payments to the company, provided they have already made three (or annual payments. This is known as the surrender value of the policy, and is equal to the net premium reserve on the policy at the time of surrender, minus a certain percentage which the company retains. If the policy-holder withdraws before the third annual premium has been paid, no surrender value is usually allowed. In that case the policy is said to lapse. On every lapsed or surrendered policy the company makes a profit equal to the difference between the net reserve on the policy and the surrender value, if any, allowed by the company.

It is not generally realized what a small proportion of the life insurance taken out is carried to its natural termination. The report of the Connecticut Insurance Department contains a table showing the percentage of the total number of policies terminated in a year by each of six

methods: by death (life policies); by maturity (endowment policies); by expiry (term policies); by surrender, by lapse, and by change and decrease. As returned by many insurance companies, the reports of policies terminated contain another class called "not taken." This shows the number and amount of the policies actually made out by the companies and entered on the books on which the first premium was never paid. The companies operating in New York State in 1903 reported to the insurance department an aggregate of \$2,927 policies under this head carrying \$174,783,472 of insurance. The Connecticut department takes no account of the "not taken" policies in calculating its percentages. If we call the first three modes of termination the regular methods, and the last three the irregular methods, we find that the percentage of the total insurance which falls in the former class varies from 3.50 (Hartford Life) to 79.58 (Provident Savings). The average of regular terminations for the 51 companies reporting to the department was 35.21 per cent. of the total terminations, leaving 54.79 per cent. as the share terminated irregularly, of which all but 5 per cent. was by lapse or surrender. Industrial insurance experiences very large percentages of lapsed and surrendered policies. Of the business terminated by the four industrial companies in Connecticut during the year 1903, 4.41 per cent. was terminated by surrender, and no less than 90.19 per cent. by lapse. This represents an enormous tax upon the resources of the laboring classes. So important is this item of lapsed and surrendered policies becoming that tables are constructed, showing the probable withdrawals in the same way that mortality tables show probable deaths.

It is by no means easy to decide just what treatment policy-holders surrendering their policies before the regular time ought to receive. Such withdrawals exercise an unfavorable influence upon the mortality of the company, since healthy persons are more ready to let their insurance drop than are those who are conscious of physical weakness. The tendency of companies in recent years has been to lessen the sacrifice involved in surrendering a policy by increasing the size of the cash surrender values allowed, and the consequence is seen in an increasing proportion of surrendered policies. On every such policy the company makes an immediate profit, but what the final effect upon the company will be can be determined only after time has shown the effect of the withdrawals upon the mortality of the group. Certain minor sources of gain or loss may deserve mention. The most important of them is the annuity account. The annuity business of insurance companies is a recent development, and comparatively few companies have as yet taken

it up. It has generally been unprofitable for the companies. Of the twenty-five companies reporting annuity business for 1903 to the Minnesota Insurance Department, twenty-one had experienced a loss on the business during that year, and only four reported a gain. Other scattering items of gain or loss appear in the reports of the companies, for some of which, even when they are of very considerable magnitude, it is impossible to discover the source. Thus in the report of its business for 1903 the Mutual Life Insurance Company charges against the interest account the following item: "Profit and loss item—loss, \$954,809.96." The only distinguishable items in its report of income and disbursements which are carried to that account are the profit and loss on the sale or maturity of ledger assets. But these two items show a balance in favor of the company of \$778,141.41, thus increasing the unexplained loss to \$1,432,661.57. This item does not include decrease in market values, which is entered separately. There is also an unexplained "suspense" credit of \$366,000.52 in the same report. In the report of the New York Life Insurance Company for the same year appears an item: "Profit and loss item—gain, \$900,502.89." The net profit on sale or maturity of ledger assets was \$232,100.89. The source of the balance of the gain cannot be determined from the report.

The following analysis of the financial results of life insurance practice is based upon the 1904 reports of the insurance departments of Connecticut, Illinois, Massachusetts, Minnesota, New York and Ohio, and covers the business of twenty-four companies for the twelve months ending December 31, 1903. All the life insurance companies which reported to all the departments are included, except the John Hancock, the Metropolitan and the Prudential, a large part of whose business is industrial insurance. The list of companies, together with the statistics concerning them used in this paper, will be found in the accompanying table. The attempt is made to bring out clearly in the table not only the relation between the total income and the total expense of each company for all the companies, but also the state of each of the separate accounts to which the different parts of the income are theoretically assigned. Let us begin with an examination of the mortality account of the companies.

Column 5 gives the net mortality loss to be expected by each company during the year according to the mortality table; i. e., the sum of the indemnities the company has prepared to pay minus the sum of the reserves it has accumulated on the policies to fall due. Column 6 gives the actual net mortality loss experienced by each company, and column 7

BUSINESS OF INSURANCE COMPANIES, 1903

1	2	3	4	5			6			7			8			9	10	11	12			13	14	15
	NAME OF COMPANY	CAPITALIZATION ¹	Pension Income, 1965 ²	Expected ³	Actual ⁴	Pay Cont ⁵	Interest Required ⁶	Net Income ⁷	Pay Cont ⁸	Invested Pay Pay Cont ⁹	Lossing ¹⁰	Actual Expenses	Pay Cont ¹¹	Management Expense ¹²										
1	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										
2	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										
3	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										
4	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										
5	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										
6	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										
7	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										
8	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										
9	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										
10	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										
11	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										
12	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										
13	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										
14	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										
15	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										
16	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										
17	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										
18	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										
19	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										
20	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										
21	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										
22	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										
23	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										
24	Allegiance	\$1,000,000	\$1,345,412	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	99	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412	\$1,345,412										

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18. Y. p. 100.

Min. ex. rate.

* *Musa. n. acule*

• **Millions of people** are working in the service sector.

• 34100. P. - 1999

7. *Actin. p. 221*

* Calculated.

see p. 412.

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BUSINESS OF INSURANCE COMPANIES, 1903.—Continued.

No.	Name of Company	STANDARD VALUES				GAIN AND LOSS EXHIBIT* (in NUMBER THOUSANDS. GAINS +; LOSSES, —)									
		REVENUES ¹	VALUES PAID ²	PER CENT ³	MORTALITY	DISBURSERS	LOANING	INTEREST	ANNUITIES	CHARGES IN MARKET VALUES	MISCELLANEOUS	CONSIDERED GAIN OR LOSS	STOCK DIVIDENDS	DIVIDENDS TO POLICY HOLDERS	NET GAIN OR LOSS
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	Gen. Mutual	\$14,435	\$16,000	111	\$1,565	10	164	1	1	1	1	1	1	1	1
2	Gen. Mutual	10,000	10,000	100	0	0	0	0	0	0	0	0	0	0	0
3	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
4	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
5	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
6	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
7	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
8	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
9	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
10	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
11	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
12	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
13	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
14	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
15	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
16	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
17	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
18	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
19	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
20	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
21	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
22	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
23	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
24	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
25	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
26	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
27	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
28	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
29	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
30	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
31	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
32	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
33	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
34	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
35	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
36	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
37	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
38	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
39	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
40	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
41	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
42	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
43	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
44	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
45	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
46	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
47	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
48	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
49	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
50	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
51	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
52	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
53	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
54	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
55	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
56	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
57	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
58	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
59	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
60	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
61	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
62	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
63	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
64	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
65	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
66	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
67	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
68	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
69	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
70	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
71	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
72	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
73	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
74	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
75	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
76	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
77	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
78	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
79	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
80	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
81	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
82	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
83	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
84	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
85	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
86	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
87	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
88	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
89	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
90	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
91	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
92	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
93	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
94	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
95	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
96	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
97	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
98	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
99	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0
100	Gen. Mutual	15,000	15,000	100	0	0	0	0	0	0	0	0	0	0	0

1 Miles, p. xlviii.

2 Miles, p. xlviii.

3 Miles, p. xlviii.

* These figures are taken from the reports of the individual companies, and are not necessarily correct.

gives the ratio of the latter to the former. It will be seen that an company experienced a mortality loss as large as it had prepared for. The ratio per cent. of the actual loss to the anticipated loss varied from 57 to 80. The average rate per cent. for all the companies combined was 70. There were fourteen companies with rates below the average, and ten with rates above it. The average is raised by the relatively high rate of a few of the larger companies, notably the Equitable (80 per cent.), the Provident Savings (86 per cent.), and the Mutual (79 per cent.). It seems therefore that the mortality tables now in use indicate a mortality loss nearly a third larger than the loss actually experienced. In fact, as far as it from being the case that the mortality table used indicates the mortality actually expected, that conservatively managed companies which exercise care in the selection of risks consider an actual mortality loss of 80 per cent. of the indicated loss as distinctly unfavorable. The difference between the amounts in column 5 and those in column 8 form part of the surplus income or profit of the year, and appears as the first item in the gain and loss exhibit (see column 19). The figures in column 19 are taken from the detailed reports of the different companies contained in the Minnesota report, from which columns 5 and 6 are also compiled. Unfortunately, as in many other instances, there are discrepancies between the different parts of the same report which it is impossible to reconcile with the data available. The actual gain of the twenty-four companies from this source during the year 1903 was \$20,315,698.67. The premium income of the companies for the same year was, according to the New York report, \$318,238,592.93. The profit from mortality, therefore, was nearly 6.5 per cent. of the entire premium income.

The second element of the income to consider is the interest earnings of the reserve. Column 8 gives the amount of interest required according to the rate assumed by the companies in calculating net premiums. Column 9 gives the net interest earnings on all the invested funds of the companies, the amount being obtained by subtracting the investment expense of each company from its gross interest income. Column 10 gives the ratio of the actual interest obtained during the year to that required. This column shows that the net interest income of every one of the companies was more than sufficient to meet the requirements of the reserve. The ratios vary from 103 per cent. to 172 per cent. The average for all companies is 122 per cent., and there are eighteen companies with rates below the average, while only six companies have rates above it. The total profit realized by the companies from this source was \$13,578,711.42, which is 4.4 per cent. of the premium income. This

indicates nothing definite as to the real adequacy of the assumed rate of interest, since a considerable part of the gross interest income is earned by the surplus. Column 11, however, gives the net rate of interest actually earned by each of the companies as calculated by the Connecticut Insurance Department on the basis of the mean amount of admitted assets for the year. This table shows rates varying from 3.70 per cent. to 5.72 per cent. Five companies have rates below 4 per cent., eighteen between 4 per cent. and 5 per cent., while one company, the Union Central, earned more than 5 per cent. (5.72 per cent.). The average of the rates is 4.3 per cent. The average rate for the thirty companies included in the Connecticut report is 4.00 per cent. This average is kept down by the low rate realized by some of the companies with large assets, notably the Prudential (3.3 per cent.), the Equitable (3.70 per cent.), the Connecticut Mutual (3.82 per cent.), the Mutual Life (3.96 per cent.), and the Metropolitan (3.98 per cent.). Meantime these same companies are calculating reserves on the basis of interest earnings of 3 or 3½ per cent. It is safe to say that the rate actually realized on investments is 1 per cent. in excess of the tabular requirement.

The comparison of the loading and the expense account of the twenty-four companies may be made on the basis of columns 12, 13 and 14, the last column giving the ratio of the insurance expense of each company to its income from loading. This ratio is very diverse, varying from 77 per cent. in the Massachusetts Mutual and the Northwestern to 207 per cent. in the Travelers'. The average for all the companies combined is 100.5 per cent. Only nine companies have rates below the average, while fifteen run above it. Among the companies with a low rate, however, are several of the large companies, including the Massachusetts Mutual (77 per cent.), the Northwestern (77 per cent.), the Penn Mutual (79 per cent.), the Mutual Benefit (82 per cent.), and the Equitable (97 per cent.). It may fairly be said, therefore, that it requires no excessive degree of economy to enable an insurance company to keep its expenses within the limits imposed by the loading, while some companies make a large saving from that source. In this connection column 15 is of interest as showing the cost of administration of the different companies per \$1,000 of mean insurance in force. This rate shows an extremely wide fluctuation, varying from \$5.48 (Connecticut Mutual) to \$16.01 (Security Mutual). There seems to be no very close connection between the rates thus established and those shown in column 14 beyond a general tendency to vary in the same direction.

Columns 16, 17 and 18 show the results of the dealings of the com-

panies with their withdrawing policy-holders. Column 16 indicates the amount of the reserve carried in the name of these policy-holders; column 17, the amount actually paid to the policy-holders on their withdrawal, and column 18, the relation between the two. The last column shows that the surrender values allowed varied from 36 per cent. (Security Mutual) to 92 per cent. (Provident Life and Trust) of the full reserve on the surrendered and lapsed policies. The balance, therefore, varying from 8 per cent. to 64 per cent. of such reserves, became an item of profit to the companies. For the whole twenty-four companies, 21.4 per cent. of the reserves on surrendered or lapsed policies was thus retained. Ten companies retained a larger percentage than the average, fourteen companies less than the average. The proportion of the reserve returned to withdrawing policy-holders is not necessarily indicative of the attitude of the company toward them. It is largely influenced by the proportion of withdrawals during the first two years of the life of the policies, when no surrender values are allowed. The full reserve on all surrendered and lapsed policies was \$40,446,983.77, and the surrender values paid \$31,903,57.63, leaving a net profit for the twenty-four companies of \$8,543,426.14. This is 2.7 per cent. of the premium income.

The actual gain or loss of each company from each of the sources examined is embodied in columns 19 to 23. Column 23 gives the result of the annuity business, column 24 the net result of changes in the market value of real estate and securities, and column 25 the balance of other profit and loss items. Finally, the net result of the business of the year is summed up in column 26, which shows the net gain or loss of each company for the year. The general shrinkage in market values which occurred in 1903 is reflected in column 24. Only three companies could record a net gain from changes in market values, while twenty-one reported losses. For many companies the losses were large, the maximum being reached by the Mutual, which reports a loss of \$8,723,000 from this source. In spite of this unusual form of loss for the year, column 26 indicates that only three companies, the Mutual, the Travelers' and the Union Mutual failed to make a profit on the year's business. The aggregate loss of the three was \$3,242,000. The aggregate gain of the other twenty-one companies was \$21,592,000, leaving a favorable balance for all companies of \$18,352,000.

Of this surplus income a small amount was paid out in dividends to stockholders, as shown in column 27, and a much larger part was apportioned among the policy-holders. The total appropriations for these two objects exceeded the total profit for the year, and just one-half of the

companies were left with a final unfavorable balance. Column 29 shows the amount finally carried to the account of surplus or of special funds. The entire business of the twenty-four companies shows a net loss for the year of somewhat over \$9,000,000. It must be borne in mind, however, that the net shrinkage in the value of real estate and securities far more than accounted for this falling-off in surplus. The net loss from that source was about \$23,000,000. If that loss had been escaped, the deficit of \$9,000,000 would have been replaced by a surplus of \$14,000,000; the amount realized from the insurance business itself, after \$28,000,000 had been returned to the policy-holders in the form of dividends.

Whether we reach our results by an analysis of the elements of the income of insurance companies and the relation of each element to the purpose to which it is theoretically assigned, or examine directly the gain and loss account of the insurance companies, the same conclusion is forced upon us, that the premium rates are unnecessarily high. We have seen that the average experience of twenty-four companies shows a saving on mortality of over 20 per cent., an excess of interest earnings of nearly or quite 1 per cent., and a generous profit from lapsed and surrendered policies, while the loading is just sufficient to cover the cost of carrying on the business. The gain and loss exhibit indicates that but for the depreciation of securities during the year 1903 the insurance operations of that year would have brought in to the companies a profit of more than \$40,000,000 to be returned to the policy holders, or added to the surplus. With no improvement in the methods and practices of insurance companies a reduction of 30 per cent. or 25 per cent. in premium rates is possible for a company managed with average care and efficiency, and is in every way desirable.

But to bring insurance rates down to the present cost-level is only half enough. The cost itself ought to be lowered. It is demonstrable that some of the practices of insurance companies tend to increase their mortality less, that a higher net rate of interest could be secured on their investments, and that the cost of administration is often extravagantly high. Improvement in any of these particulars would materially lower the cost of insurance, and make possible a further reduction in premium rates, resulting in a wider utilization of the benefits of insurance by people of small or moderate income.

A Canadian-Named Automobile.

(TORONTO SUNDAY WORLD MAGAZINE.)

A clever little sketch on the rise of the young Canadian, who has put his name on one of the most perfect motor cars yet made. It will do every young Canadian good to read this story of push and enterprise, which has brought into prominence a comparatively young man.

MR. T. A. RUSSELL is no stranger to the automobilists of Toronto. When a man invents an automobile he figures on going down to posterity. Mr. Russell has done this. Therefore he is a modern young man and the product of the twentieth century, which is no disgrace.

Mr. Russell did not intend to invent an automobile when he first started to drive horses. He has driven many horses. The probabilities are that he intended to keep on driving horses and to own a farm—somewhat like the writer, whose large ambition at the age of fourteen was to own a she-calf, which by-and-by he might develop into a fifty-acre bush farm.

Just in what county Mr. Russell was born and bred we know not. It was not far from Toronto. Anyhow, it is not necessary to be always prying into a man's ancestry in order to discover who he is. The man's the thing. "Tommy," as he is known to his friends, needs no grand fathering. He was still a lunk, hopeful lad when he decided to leave the high school somewhere—having knocked the wind out of sundry boys at football—and go to Varsity. That was in 1896—about which time the writer of this was inditing a hum novel, which was never printed.

Automobiles were not yet heard of in Canada. The young man Russell, clear in the eye and strong in the limb, entered on a course in political science. He probably intended being a lawyer. He liked that kind of science so well that he graduated in it with high honors in '99, and became a fellow in the same, with a license to tell all the other fellows what they didn't know about the science of government, how some people get richer while others get poorer. And this was all right so far as it went, but not a finality for "Tommy."

After his graduation and fellowship with a "B.A." glued to his name, Mr. Russell drifted down to the office of the Manufacturers' Association. He was one of the chaps in the W. H. Moore category, who began to perceive that a university education is not merely for the sake of a few initials after one's name as well as before it; that science is all

very well, but Canada needs less theories and more practice; that in short this young country was a mighty practical one and that a man didn't have to go into law in order to help boost it along the road to destiny, whatever that might be.

It was not long till this practical young man with the clear eye and the shoving foothall gait got into the chair normally occupied by the secretary of the C. M. A. Said chair had been the stepping-stone to a good thing before then. The C. M. A. was not an ancient organization either, and they had sense enough to see that a young man of that build might shove things along at about the proper gait.

Anyway, for three years Mr. Russell was the secretary of the C. M. A., during which time he did some things which were in the direct line of progress. And it was just about when automobiles began to get into Canadian civilization that Mr. Russell left the secretary's desk to become the general manager of the Canada Cycle and Motor Company; for it was evident that he would be the kind of a man to take the pleasure to things that go.

Well, he is still there. He has since exploited a new automobile, of which we have spoken before. Not knowing any better name, and purely out of respect for his family, he called it the "Russell."

In this he is unique as the first Canadian to attach his name to an automobile. He might have stayed on the farm and been a mighty good farmer, with plenty of prizes at the big fair, and his name in the paper every spring and fall. He might have been a lawyer, with his name in the paper every once in a while and a gilt sign on a window. But he chose to be a twentieth century man out and out and put his name to an automobile. In this way he is dead sure that "Russell" will be going ahead most of the time, and some of the time just as fast as the law will allow.

T. A. Russell does not spend much time thinking about schemes of government or theories of supply and demand. He has bottled his political science down and strained it. He put it into a business. And he is still a young man. So we should not say that he travels much on mere style or banks a great deal on ceremony. He does not mope; neither does he write poetry. When he rises to speak in public, he does not become either intensely funny or irresistibly eloquent. But when he speaks, he says something, which is more to the point. And he knows exactly when his gasoline is gone, so he stops before he has made anybody tired with either long arguments or alleged humor.

The particular point in this sketch after all is that, while it may be

a very glorious thing for Canada and Toronto University to have been turning out wise men that we shipped abroad because we had no room or money for their particular type of wisdom, it is much more useful and according to sound progress to educate practical, aggressive men like "Tommy" Russell. This is a lesson Canada has been mighty slow to learn; for which reason partly this country has been a prospector's paradise for many very smart Americans. That era is passing out. The young men of Canada are forging ahead. They are taking hold of Canadian political economy problems by the horns. They are doing things. And if they happen to have a "B.A." at the rear of their names, they don't parade it in their signatures, because they are eternally too busy to bother with trills.

The European Parcels-Post.

BY J. HENNIKER HEATON, M.P., IN THE ARENA.

The enthusiastic advocate of postal reforms is quite at home when he sets out to praise the parcel-post system now in force in Europe. He recognizes the dangers of a C.O.D. system to local traders, but believes they can be avoided by instituting the Zone system. Many interesting facts and figures are supplied.

THE American is tolerant enough of foreign criticism of his ways; for such criticism he is persuaded is due either to presumption or to ignorance, and is therefore rather amusing.

The ideal of civilized government—a fair distribution of happiness—is doubtless more consistently pursued and more nearly attained in the United States than in any other country,—with the possible exception of England. With the presence of genius Bacon placed his Utopia in the West. American institutions, however, are framed on so colossal a scale that it requires a certain degree of mental detachment to see them in their entirety. An inhabitant of some village like Chamounix, at the foot of the Alps, knows nothing of the feelings with which a traveler approaches that stupendous range and sees at one glance snow-capped summits spring to the clouds, pine-forests, glaciers, green meadows and rivulets like diamond necklaces.

"'Tis distance lends enchantment to the view
And robes the mountains in its azure hue."

Some phenomena are revealed by the microscope; others, for instance sunspots, can only be studied with the telescope. For many years I have

thus, from a far observatory, studied one feature of American activity—the post-office; and I think I may claim that my interest has been of a benevolent character. Let me not be hastily accused of perversity when I assert that the American post-office, with its 80,000 branches, has yet unexplored territories to develop, and that the chief merit in its administration is the existence of a deficit of \$8,000,000. I am not, of course, bold enough to argue that a deficit is desirable in itself. If I were postal dictator at Washington for twenty-four hours I would abolish this deficit without injuring the service. But a great principle is at stake.

The high postal-officials at Washington have set the public interest above the natural desire to show a profit, and their courageous policy which shocks St. Martin's le Grand, is, I rejoice to see, imitated in more than one British colony.

The principle actuating them must before long bring about two-cent postage to the rest of the world, and what I am here concerned with, a United States Inland Parcels-Post. These measures seem to me of vital importance to commerce, and no less indispensable from the social point-of-view. One is reminded of the paradox of Oliver Wendell Holmes, philosopher: "Give us the luxuries of life, and we will dispense with its necessities."

The reason why the progressive republic is so far behind Europe in this respect was made clear to me in a conversation with my friend the Hon. John Wanamaker, for some years Postmaster-General of the United States. After hearing me dilate on the incalculable convenience and stimulus to trade of a parcels-post and the unrivaled excellence of the organization available, ramifying into every village, he spoke to this effect:

"All that is true. But there are four insuperable obstacles to the establishment of a parcels-post in our country. The first is the ——— Express Company; the second is the ——— Express Company; the third is the ——— Express Company; the fourth is the ——— Express Company." (I do not give the names he mentioned; first, because it might be resented; and, secondly, because I forget them.)

With the utmost respect for my distinguished friend, I contend that this simplifies the problem considerably.

A Roman Emperor wished that humanity—or did he content himself with saying the Roman people?—had but one neck, that he might end it at a blow. It is certainly convenient for reform when a gigantic abuse is concentrated in the hands of only four beneficiaries.

There is no doubt that American civilization is an independent growth, owing little to other countries. Conventions rigidly enforced on

the Englishman, Frenchman or German are not binding on travelers from New York, Boston or Chicago. Some sense of this was conveyed in the sign of the place of entertainment at Paris, called "Hotel de l'Univers et des Etats Unis." Yet this precocious young nation has a few things to learn from its elders—for instance that monopolies in private hands are contrary to public policy. European opinion is in favor of entrusting the conveyance of parcels to the post-office, supplemented where necessary by private enterprise.

The first of the numerous advantages of a parcels-post over carrying companies is cheapness. Theoretically an American tradesman has 80,000,000 of potential customers. But a parcel sent from New York to San Francisco, or from Galveston to St. Paul, has to run the gauntlet of the express companies, each, I presume, with a directorate to be remunerated and shareholders or partners hungering for dividends. Similar conditions existed in Germany not many years ago. Every little principality nibbled at the booty, which arrived like the empty shell of that stilt, from which the rats rush when it is placed before the King, in the pantomime of Dick Whittington.

The post-office has no shareholders to pay and can and will, even at the risk of a deficit, cut down its charges to the lowest remunerative point. The company may offer more civility, but the cold, repellent postal-official gives the utmost attainable speed and regularity of service at a lower rate. Some time since, by way of experiment, one hundred parcels were posted in England, and on the same day one hundred similar parcels were directed by the carrying-companies to the same recipients. Seventy-one per cent. of the parcels posted were received before their duplicates entrusted to the carriers.

He was a bold man who, in the middle ages, ventured a parcel in the hands of the English carrier or peddler. There must have been a certain amount of traffic from the large towns to country-houses and farms in their neighborhood. But who would then have ordered a London shopkeeper to despatch goods into Yorkshire or Devonshire? How many customers living more than fifty miles from the metropolis dealt with such a shopkeeper? Even when the stage-wagon and in more recent times coaches were regularly despatched, there must have been but a comparatively trifling number of small packages. Messrs. Pickford and other carriers took what there was to convey, and doubtless did their best.

But with the railway communication came a growing desire for a cheap, expeditious and universal system for the forwarding of parcels, and the greatest of our postmasters-general, the late Henry Fawcett,

established the English parcels-post on the first of July, 1883. He was blind, and had first grown to fame as an University Don, but as Minister he displayed the administrative skill of a Kitchener, and so brilliantly successful was the new organization that every considerable country, with the notable exception of the United States, soon had its parcels-post also.

One would like to think the British arrangement in every respect worthy of imitation, but it has two serious defects. It is hampered by the obligation to pay an excessive amount (fifty-five per cent. of the postage on railway-borne parcels) for railway transit. And it does not include the "cash-on-delivery" system, under which the post-office collects from the addressee the price of goods on delivery and transmits it to the sender. In these two respects the Continental parcels-posts are superior to ours.

In England the sender must take his parcel to a post-office, where the clerk has to be satisfied that it is not more than eleven pounds in weight; that the proper postage stamps are affixed and that its combined length and girth do not exceed six feet. That the British postman is, however, less robust than the German, who accepts any parcel up to 110 pounds, I refuse to believe. The rates of postage are:

For a parcel not exceeding one pound, 6 cents; two pounds, 8 cents; three pounds, 10 cents; four pounds, 12 cents; five pounds, 14 cents; six pounds, 16 cents; seven pounds, 18 cents; eight pounds, 20 cents; nine pounds, 22 cents; eleven pounds, 24 cents.

Our post-office likes to have the address written on the parcel. The regulations warn the public against writing addresses on "tie-on" labels, which frequently become detached in transit through no fault of the Department. This mysterious phenomenon is doubtless the cause of much anxiety to the innocent officials. With the best intentions, the detached labels having been collected, might be attached to the wrong parcels, and thus an elderly splinter might receive a box of cigars and an obstinate old hacheler a curled "front."

Some of the rules err on the side of over-caution; for instance, that forbidding the forwarding of cannon to Ireland. What desperate rebel would venture on smuggling revolutionary batteries through the Saxons post-office? One can sympathize with the firm rejection of live creatures, such as the snakes, leeches and insects exchanged by ardent naturalists. But why is the dog, the friend of man, refused; or Grimaldian, best ornament of the fire-side, or sturdy Chanticleer, while an exception is made in favor of bees?

The official antipathy to eggs points to a vast correspondence with

the public on the subject of breakages. Minute directions are given as to the packing, but the sorrowful note is appended: "Even when so packed, eggs are very liable to be broken in course of transit." Compensation is refused for the breaking of eggs; but as another rule gives compensation for the loss of a parcel, the broken shells are duly delivered to the irate addressee.

With the exception of eggs, compensation not exceeding ten dollars is paid for any parcel lost or destroyed. If the parcel be registered (costing four cents) and a small fee (up to twenty-eight cents) be added, compensation not exceeding \$200 will be allowed.

The severest American,—or for that matter English—critic of German ways, will find much worthy of imitation in the German parcels-post-office. It may be regarded as the highest type of the arrangements existing in the greater part of the European continent; and it is therefore worth while to describe it in some detail. Broadly, the difference between the English and German posts is, that the former only does postal work for the individual which he cannot do for himself, while the latter undertakes everything that it can do better than the individual can. The former resorts to the powers of the State with fear and reluctance; the latter works them for "all they are worth."

As far back as the reign of Maximilian I., a contemporary of our Henry VII., there was an organized delivery of parcels all over Germany. The service was in the hands of private persons, each confined to the route between two great towns, and the most rapacious modern carriers would hesitate to put forward some of their pretexts for extortion. How it could be worth while to send parcels at all, I know not; one thinks of a fox trying to cross half a dozen hunting counties and losing fur in each.

Every section had its own tariff, calculated according to the course of the mails and the time occupied. When parcels were transferred from one contractor to the next, when mountain-passes or rivers had to be crossed, and even when the medieval road was bad, further fees were charged. Another tax was levied in support of certain industries unnamed (possibly including blackmail to local highwaymen). There was an additional charge in winter. Finally, there were three classes of charges for goods. The first or lowest charge was made for articles of food, excluding dainties. The second applied to ordinary goods and was twice the amount of the first. The third, which was four times the amount of the first, was levied on precious goods like silk, velvet and luxuries, such as printed books! One is reminded by this harshness to literature of a much later German prince, our George II., who, says

Thackeray, was always furious at the sight of books. It was, of course, difficult to know beforehand what there was to pay under what a German friend graphically describes as this "hubbub of charges."

The Great Elector (1640-88), founder of modern Prussia, vested postal administration in the State about the time when the British post-office was established by Charles II.

He abolished the mysterious allowances in favor of certain industries, and having no fear of professors of political economy, ordained *ex mero motu*, that poor persons should only be charged half-rates! As might have been expected, this enlightened prince also remitted the extra taxation on books, doubtless to the disgust of his Electoral brother and neighbor of Brunswick. In 1713 special charge during the winter months was abolished.

For a long time there was no great change in the conditions affecting the conveyance of parcels, except that in 1801 the length of the route was made the basis of charge. It is, however, noteworthy that the rates were raised under Frederick the Great during the Seven-Years' war, and again (fifty per cent.) during the domination of Napoleon. The "mailed flat" grabbed even at postage. In 1821 the division into three classes was put an end to. A uniform tariff applied to all parcels, whatever their contents, except those containing jewelry, etc.

The existence of railways facilitated the exchange of parcels, and perhaps suggested the agreement of the various kingdoms, duchies and principalities in 1857 to levy but one uniform rate throughout the Fatherland. Austria is also included.

In 1873 the present tariff was promulgated for the whole extent of the German and Austrian empires. Under this the charge varies first according to weight, and next according to distance.

Weight.	Distance.	Postage
Not exceeding 5 kilogram, or 11 lbs.	Up to 10 German miles, or 16 English miles.	6 cents.
For every additional kilogram, or 2 1/2 lbs.	Unlimited.	12 "
	10 German miles,	8 pfennigs: (less than 1 cent.)
	30 " "	10 pfennigs.
	50 " "	20 "
	100 " "	30 "
	150 " "	40 "
	Over 150 " "	50 " (or 12 cents.)

(The least of weight is 50 kilogram, or 110 lbs.)

The German parcels-post has many merits. In the first place it adapts handled, but he draws the line at explosives and caustic acids, the conveyance of which he prudently leaves to the parties interested. One remarks that he exacts an additional fifty per cent. for things requiring

careful handling, such as animals and bathoses. We can understand his claim for handling a Danish hound, able to swallow him, but the amercement on bathoses seems unduly severe. It may indicate much untoward experience in dealing with them, or even a desire in high quarters to discourage the wearing of the "top-hat."

The German parcel-post has many merits. In the first place it adapts the "zone" system to the conveyance of goods. It is manifestly unfair that it should cost as much to send a parcel fifty as to send it 1,000 miles. A uniform charge is fair in the case of letters, which are of inappreciable weight and occupy little space. But parcels are comparatively heavy and bulky, and the post is largely employed by advertising traders. It is but just that a manufacturer sending his goods 1,000 miles to compete with local dealers should defray at least part of the expense of transit incurred by the post-office.

As the railway mileage of the United States exceeds that of all Europe, it is plain that an American parcels-post should be based on the "zone" system. In this way the danger which I understand is apprehended to small local industries would be done away with. The German view is that the local trader does not suffer. On the other hand, consumers and producers, without reference to their geographical position, are placed on the same footing. Everybody can supply his wants easily and cheaply from manufacturing headquarters, however distant.

It is even possible, by means of the post, to transfer certain industries to localities where lower wages and duties are paid and to open up new and remunerative markets.

Another distinguishing feature of the German parcels-post is its rapidity of operation. Nearly every train carries mails and parcels, being in at station after station, and parcels are frequently delivered as soon as letters. It is needless to point out how vitally important this is to innumerable little industries, such as those of the struggling farmer and market-gardener. Flowers are received with the dew still glittering on their petals; fish that Dr. Jonathan Hutchinson would not disdain.

This breakneck speed might well inspire our phlegmatic British officials, who are content to observe a moderate degree of haste. "Moderation," said somebody, "is good in all things." "No, sir," replied Dr. Johnson (who as a Londoner was dependent on the carriers for country produce); "no sir: no man likes a moderately fresh egg."

The German post has no occasion to enforce heavy rates. It can impose its own terms on the railway companies. By law these have to carry free all parcels under eleven pounds in weight. Thus the mistake

which has crippled the activity of the British parcels-post has been avoided.

But the value of the parcels-post to the people is, in my opinion, doubled by the ancillary system of "cash on delivery." Schmidt, resident in Trieste, sends a post-card to Zeiss, of Jena, ordering a microscope, price \$250. Zeiss never heard of Schmidt, but he sends the instrument by the first train. He runs no risk. The postman at Trieste, before handing it over to Schmidt, presents the invoice, receives the \$250 and by the next post the money is remitted by the post-office to Zeiss. How this plan encourages trade, by eliminating bad debts and long credits, may be gathered from the following figures which do not include Wurtemberg and Bavaria:

UNWEIGHED PARCELS SENT BY GERMAN PARCELS-POST.

Year.	Number.	Year.	Number.
1898.....	26,900,406	1893.....	119,352,481
1897.....	36,000,147	1901.....	100,516,303
1902.....	74,876,560		

The Imperial postal officials do not disdain to act as news-agents. A farmer in Silesia signs for a Berlin journal—one of those flimsy, illustrated and portentously grave publications over which our German friends love to pore over by the hour. Good; he enters the village post-office and pays his modest subscription in advance; and thenceforth day by day is kept in touch with the outer world, while his subscription is duly remitted to the publisher of the Blatt selected.

I shall never forget my inspection of the parcels-post building at Berlin. Such grim bustle, such ordered haste, such sudden surges of uniformed toilers, such mountains of baskets, boxes, parcels, melting down into yawning vans; such galloping of hoofs without, such ceaseless tramping within, the whole din dominated by sharp words of command—it suggested the eve of battle and the stern methods of warfare rather than the prosaic humdrum routine of postal work. Cocks crowed in their crates, huge mastiffs bayed, canaries from the Hartz shrilly piped; the huge yard of despatch could have furnished a fair, or supplied a settlement; and everything was sent off at the right time without a hitch, while Herr Karl Kirchhoff, the organizer and director of all, stood like an admiral on his bridge to see that all went well.

Now for a few figures. Let me beg my readers to bestow upon them not the reluctant attention of the schoolboy to the arithmetical blackboard, but the complacent appreciation with which they regard periodical bank statements showing the investments to their credit. Though a lover of statistics, I will be moderate and will not abuse the editor's hospitality. I will not imitate D'Artagnan, who, when invited

to lunch by the Cure, brought with him his three starving friends and their lackeys. Still it is well for the most confident reasoner to have figures in reserve, just as it is for the sheriff to be attended by his posse and for the ambassador to be backed by a compact squadron.

Here are some significant figures, especially in column four:

PARCELS DELIVERED IN THE UNITED KINGDOM.

Year.	Number.	Postage.	Share of Railways.	Share of P. O.
1911-2	37,130,000	\$8,636,835	\$3,657,325	\$1,369,320
1910-1	71,913,900	7,494,485	3,539,680	3,561,635
1909-10	54,128,000	5,742,173	4,276,868	3,284,309

This huge and increasing cattle annually claimed by the railways is secured under the rash bargain allotting them fifty-five per cent. of the postage on all railway-horse parcels. Englishmen can only regard with something like envy the powers of interstate railway rates regulation which in the United States are entrusted to an independent commission.

On the initiative of the German Government an international parcels-post was established, which has been of great value to traders. The figures appended speak for themselves:

1903-4

PARCELS DISPATCHED FROM AND RECEIVED IN THE UNITED KINGDOM.

Austria-Hungary	20,747	New Zealand	47,633
Belgium	38,473	Orange R. Colonies	37,669
Canada	179,808	Queensland	19,039
Cape Colony	337,848	S. Australia	10,834
Egypt	55,990	Spain	32,868
France	214,223	Straits Settlements	21,124
Germany	867,915	Switzerland	98,552
Holland	106,616	Tasmania	4,946
India and Persia	238,528	Toronto	171,973
Italy	178,714	Tropical and Tropic	11,388
Japan	15,882	United States (despatched only)	37,782
Mexico	6,721	Victoria	25,683
Natal	74,362	W. Australia	15,662
Newfoundland	4,059		
S. S. Wales	53,973		

These are the principal items in a long return. It may be added that the parcels despatched to the United States showed an increase of 15,696 over the figures for the preceding year. Total number despatched to all countries from the United Kingdom was 2,213,891, as against 2,500,363 received; the increase being respectively 104,064 and 50,034. I shall always regard the French and American figures with a sort of paternal interest. It took me years to secure a parcels-post to France, and years have elapsed since I first began to agitate for a similar post to the United States, now happily agreed upon. It may be stated that the value of the goods exported from and received in the United Kingdom by parcels-post was last year \$23,906,799. The British Government has established a uniform set of charges for parcels to most of the colonies as follows: Up to three pounds, 24 cents; seven pounds, 48 cents; eleven pounds, 72 cents

Radium and the Sun.

(LEISURE HOUR.)

The reader's mind is almost unable to comprehend what is here disclosed about our great luminary, the sun. Its distance from the earth, its immense size can only be estimated by comparisons. Of its nature and of its wonders men know but little. For the most advanced theories, this article should be consulted.

IN the early days of electric lighting an exhibition was held at the Crystal Palace, where admiring crowds flocked to view the varied manifestations of the new wonder. The building had become a veritable fairy palace, ablaze with a pure soft light, displayed in every form, from the tiny glow-lamps, nestling among fountains and turning their spray into silver, to the powerful arc-lamps which transformed the blackness of night into the broad white light of day. But much more. Here and there the current was diverted into other channels, and made to perform a multitude of different offices. Machinery of all kinds was put in motion. Heating, cooking, photography and a hundred arts were being carried on by the agency of one and the same subtle power. And when all this varied display had been examined, the visitor was conducted to the basement, where the solemn furnaces were aglow, and the air quivered with sullen heat. And then the thought came home how the little world of varied wonder and beauty overhead was simply the outcome and adaptation of that common form of energy which gleamed through the furnace-doors.

Rightly considered, one could see here in miniature a presentment of what is taking place in the great world without. The whole machinery of life, and all that pertains to life on our planet, is but the outcome of one grand source of energy. We gather the fruits of the earth to sustain our being. We behold and revel in the light of heaven, we bask in the genial warmth of summer, and gather round the blazing logs on winter nights. We feast our eyes on the beauties of Nature—the verdant fields and forests, the waterfalls, the cloud-forms in the blue vault above. By the magic power of steam we speed across the breadth of continents and traverse the wide ocean by the aid of the winds of heaven. And then when we pause to consider we trace the source of all simply to that great furnace-fire, the sun, which hourly manifests his might in these and a thousand other ways.

Here, too, science has shown us how we may look through a chink in that mighty furnace-door, and catch a glimpse of what is taking

the Englishman, Frenchman or German are not binding on travelers from New York, Boston or Chicago. Some sense of this was conveyed in the sign of the place of entertainment at Paris, called "Hotel de l'Univers et des Etats Unis." Yet this precocious young nation has a few things to learn from its elders—for instance that monopolies in private hands are contrary to public policy. European opinion is in favor of entrusting the conveyance of parcels to the post-office, supplemented where necessary by private enterprise.

The first of the numerous advantages of a parcels-post over carrying companies is cheapness. Theoretically an American tradesman has 80,000,000 of potential customers. But a parcel sent from New York to San Francisco, or from Galveston to St. Paul, has to run the gauntlet of the express companies, each, I presume, with a directorate to be remunerated and shareholders or partners hungering for dividends. Similar conditions existed in Germany not many years ago. Every little principality nibbled at the booty, which arrived like the empty shell of that stilt, from which the rats rush when it is placed before the King, in the pantomime of Dick Whittington.

The post-office has no shareholders to pay and can and will, even at the risk of a deficit, cut down its charges to the lowest remunerative point. The company may offer more civility, but the cold, repellent postal-official gives the utmost attainable speed and regularity of service at a lower rate. Some time since, by way of experiment, one hundred parcels were posted in England, and on the same day one hundred similar parcels were directed by the carrying-companies to the same recipients. Seventy-one per cent. of the parcels posted were received before their duplicates entrusted to the carriers.

He was a bold man who, in the middle ages, ventured a parcel in the hands of the English carrier or peddler. There must have been a certain amount of traffic from the large towns to country-houses and farms in their neighborhood. But who would then have ordered a London shopkeeper to despatch goods into Yorkshire or Devonshire? How many customers living more than fifty miles from the metropolis dealt with such a shopkeeper? Even when the stage-wagon and in more recent times coaches were regularly despatched, there must have been but a comparatively trifling number of small packages. Messrs. Pickford and other carriers took what there was to convey, and doubtless did their best.

But with the railway communication came a growing desire for a cheap, expeditious and universal system for the forwarding of parcels, and the greatest of our postmasters-general, the late Henry Fawcett,

established the English parcels-post on the first of July, 1883. He was blind, and had first grown to fame as an University Don, but as Minister he displayed the administrative skill of a Kitchener, and so brilliantly successful was the new organization that every considerable country, with the notable exception of the United States, soon had its parcels-post also.

One would like to think the British arrangement in every respect worthy of imitation, but it has two serious defects. It is hampered by the obligation to pay an excessive amount (fifty-five per cent. of the postage on railway-borne parcels) for railway transit. And it does not include the "cash-on-delivery" system, under which the post-office collects from the addressee the price of goods on delivery and transmits it to the sender. In these two respects the Continental parcels-posts are superior to ours.

In England the sender must take his parcel to a post-office, where the clerk has to be satisfied that it is not more than eleven pounds in weight; that the proper postage stamps are affixed and that its combined length and girth do not exceed six feet. That the British postman is, however, less robust than the German, who accepts any parcel up to 110 pounds, I refuse to believe. The rates of postage are:

For a parcel not exceeding one pound, 6 cents; two pounds, 8 cents; three pounds, 10 cents; four pounds, 12 cents; five pounds, 14 cents; six pounds, 16 cents; seven pounds, 18 cents; eight pounds, 20 cents; nine pounds, 22 cents; eleven pounds, 24 cents.

Our post-office likes to have the address written on the parcel. The regulations warn the public against writing addresses on "tie-on" labels, which frequently become detached in transit through no fault of the Department. This mysterious phenomenon is doubtless the cause of much anxiety to the innocent officials. With the best intentions, the detached labels having been collected, might be attached to the wrong parcels, and thus an elderly splinter might receive a box of cigars and an obstinate old hacheler a curled "front."

Some of the rules err on the side of over-caution; for instance, that forbidding the forwarding of cannon to Ireland. What desperate rebel would venture on smuggling revolutionary batteries through the Saxons post-office? One can sympathize with the firm rejection of live creatures, such as the snakes, leeches and insects exchanged by ardent naturalists. But why is the dog, the friend of man, refused; or Grimaldian, best ornament of the fire-side, or sturdy Chanticleer, while an exception is made in favor of bees?

The official antipathy to eggs points to a vast correspondence with

a body falling through a single inch would acquire a velocity of hundreds of miles per hour.

Then, again, the conception of an indraught of matter on the sun gains on the imagination when, as sometimes happens, we catch a glimpse of that striking phenomenon in the sky known as the Zodiacal Light, a nebulous cone of light somewhat resembling the Milky Way, which, starting from that point of the heavens where the sun has just set, or where it is just about to rise, tapers upwards in the sky, forming in reality a vast lens-shaped mass, lying in the plane of the planets, extending from close in upon the sun to perhaps as far as our own orbit, and commonly supposed to consist of meteoric matter.

Again, meteorites are constantly falling in our own earth, a fact which might seem to lend further corroboration to this theory, only that it is really here where the objection to it begins to come in. For mathematical reasoning shows that if the sun is merely refreshed by falling matter, then we on earth ought to be molested to such an extent that it would not be safe for us to go abroad without some form of meteoric umbrella. Moreover, Venus, and yet more Mercury, being still more in the storm, ought to give some evidence of actual perturbation therefrom.

Speculation on some such lines as these was all that astronomers had to be content with only a short while ago, and we can now look at what they had been able to learn from actual observation. Among the earliest objects to arrest their attention were the spots which at regular periods of about eleven years appear on the sun's surface, chiefly on two zones, fairly corresponding in position with the belts on the earth where the trade winds blow. When definition is particularly good the entire surface wears a mottled or corrugated appearance, as of bright clouds separated by minute interstices or pores. These clouds have been fancifully compared to rice-grains or willow-leaves, and give the idea of being suspended over a darker atmosphere within; while a spot suggests a vaster rift among these clouds, often vast enough indeed to allow of a body as large as our earth falling clear through its aperture.

When an astronaut has ascended in broad day, say a couple of miles above the earth, it often happens that the view below will fall in with cloud, in which case its upper surface is of dazzling brightness; and if an opening should present itself showing empty space below, this appears dark by contrast, and such an aperture may, by way of illustration, be compared to a spot on the sun's face or photosphere. The strange shapes and curious changes in the spots are beyond all wonder, and one

chief spot is a group will sometimes rush forward, leaving its smaller companions many thousand miles in the lurch.

The evidence of all this, and of the fact that the sun's density as a whole is far less than that of our earth, goes to prove that his outer surface as presented to us is composed of intensely luminous gases which are being swept along by solar tempests of inconceivable fury. A further evidence of these terrific storms is afforded by outbursts resembling tongues of red flame, mainly composed of incandescent hydrogen, seen to be playing around the limb at the time of a total solar eclipse. These appearances, termed Solar Prominences, are thrown outwards into space to heights ten or twenty thousand times the heights of our loftiest mountains; and reaching those supreme altitudes in an interval of time to be measured by minutes only.

But astronomers had seen and noted other of the sun's belongings. It is at the time of a total solar eclipse, when the bright surface of the sun is shrouded by the dark body of the moon, that the ethereal inexpressible glory called the Corona is seen. This wondrous appendage which has puzzled observers of all times remains still in mystery. A story is told of a learned professor who, while examining a class in astronomy, asked one of his pupils the simple question, "What is the Corona?" Upon which the individual appealed to, being at a loss, fell back on a reply, the like of which we have all heard before—"He had known, but was very sorry he could not recollect just then." This evoked from his senior the ironical rejoinder, "What an incomparable loss to science! To think that only one man in all the world has known what the Corona is, and that he has forgotten it!"

Its wonder is in keeping with its rarity. Were a man already grown and to have devoted the whole of his life to witnessing every available solar eclipse, all the fleeting opportunities of observing the Corona added together would probably not reach half-an-hour. It has been supposed that the Corona may have an electric origin, and alters its form and appearance through a cycle of years corresponding with that of a sun-spot period; and it is at least certain that the outbreak of sun-spots is closely connected with magnetic disturbances. Extending outside the Corona are systems of long rays which stretch away far into space, and these rays, in accordance with recent researches made by Mr. E. W. Maunder, are now conceived to be visible manifestations of magnetic influence which emanate from areas of disturbance on the sun's surface, and strike the distant earth "like streams from a fireman's hose."

But, as may be supposed, it was by aid of the spectroscope that

astronomers had gathered the most important information as to the nature and condition of the actual elements which constitute the sun's being. Applying the instrument to one of these spots it at once reported that those mysterious caverns are regions of comparative coolness, and, moreover, that the vapors within grow denser as greater depth are explored, and that below all is some white-hot solid or liquid, shining through luminous vapor. There seems to have been little else discovered or discoverable, save that the elements thus far found in the sun were for the most part, but not quite entirely, those known on our own earth.

With the acquisition of so much positive knowledge it had reasonably been supposed that the constitution of the sun had in the main been analyzed. But the aspect of this perplexing problem has undergone a radical change with the last two years. The latest discovery of science has altered our conception of many problems, and of this among the number. This last discovery is of radium, and of other substances possessing radium-like activity—an activity which to our senses appears eternal. For radium is considered to go on producing heat practically for ever. One of our greatest astronomers and mathematicians gives as his opinion that "we have no right to assume that the sun is incapable of giving out energy to a degree at least comparable with that which it would do if made entirely of radium."

What a thought have we here! If the sun were all radium, or composed of matter behaving like radium, what then? Is it conceivable that any source of energy is eternal? To our almost certain knowledge suns that now are dead and cold lie strewn through space; others shine feebly and dull red like heated iron which is cooling and ceasing to glow. Look on far enough into the unknown future, and will it become literally and lastingly true that the sun shall be darkened, and the moon not give her light? What then? To the eye of the universe one small star will have ceased to shine!

Surely we cannot rest content with this thought. Let us rather quote the eloquent and prophetic words of Sir Oliver Lodge: "The atoms are crumbling and decaying. Must they not also be forming and coming to the birth? This last we do not know as yet. It is the next thing to be looked for. Decay only without birth and culmination cannot be the last word. This discovery may not come in our time, but science is still den from the wise and prudent of all time. Surely somewhere there must be joy at seeing man thus entering into his heritage, and realizing rapidly growing, and it may. We now know things which have been hid—those primal truths concerning his material environment whereof he has been living in ignorance all these thousands of years."

The American Woman in Business.

BY ONE OF THEM IN THE GRAND MAGAZINE.

Unconventionality has been attributed as a leading trait in the character of the American young women, but the writer explains that this unconventionality is largely a matter of manner, assumed when it is the thing to be unconventional. She gives an account of some of the businesses in which women have been successful, notably printing in the West and fancy farming in the East.

THESE are two distinct tendencies which are to be noted in relation to the work of women in the United States in recent years. Broadly speaking, public opinion is becoming more and more tolerant of women in all pursuits for which they as individuals are fitted. On the other hand, there has been for some time a growing sentiment deprecating an unwarranted feminine ambition to invade fields that have always been reserved to masculine labor. It has been recognized for some time that any woman may without question pursue whatever path in life she chooses, but neither she nor the public at large any longer consider that in taking up the work of the outside world she becomes a superior being or is any more to be admired either by her own or the opposite sex than she who pursues the path of immortal domesticity.

This point of view, perfectly acceptable to the girl who is frankly desirous of pursuing some particular kind of work because she likes it or is in actual need of the money which it will bring in, is not apt to be artificially encouraging to the girl who merely wishes to be unusual or superior, or to escape from the restraints of home life. So that the general tendency among women-workers is latterly towards those kinds of labor for which Nature has best fitted them. From the women who enter the professions modify the proceeding to a considerable extent by exercising their ability chiefly in the service of their own sex or in the interests of philanthropy.

But in spite of these conditions, which prevail in the masses of the feminine population, the American spirit of adventure continues to break out here and there in the American girl, especially if she comes from the Western section of the country. As a body American girls are not as conservative as are the English; but she who desires to be truly unconventional, after the first picturesqueness of entering an unusual avocation has worn off, is quite as rare among American girls as among any other class of young women. The unconventionality of the average American girl is, after all, largely a matter of manner, and she is unconventional

when it is the thing to be unconventional, and correct and proper when it is the vogue. Nor does the American girl who breaks away from traditions altogether go a bit farther, if as far, as the English girl who decides to be independent and starts out to make her own way in the world. The difference is not so much in the girl as in the country, which offers so many easy opportunities to members of both sexes to enter almost any career which they may desire. This generosity of American men towards working-women has enabled women to add to the pursuits in which they are engaged, according to the latest report of the Bureau of Labor at Washington, the following callings: Auctioneers, baggage-men, brakemen and conductors on steam railroads, blacksmiths, boot-blacks, brick and stone makers, butchers, carpenters and joiners, ship carpenters, charcoal, coke and lime burners, civil engineers, conductors and motormen on electric railways, draymen, teamsters and expressmen, engineers and firemen on steam railroads, mining, mechanical, and electrical engineers, fishermen, hostlers, coal-yard laborers, longshoremen, lumbermen and raftmen, machinists, millers, coal, gold, and silver miners, brass, iron and steel moulders, oil-well employees, painters, glaziers and varnishers, pilots, plumbers, quarrymen, roofers and slaters, sailors, steredores, switchmen, surgeons, and veterinary surgeons.

In most of these unusual avocations there are only a handful of women engaged, so that the list demonstrates not so much that women's labor is becoming defeminized as that all doors are open to her should she choose to enter. To the native-born American, reared in the purely American traditions, the employment of women in the rougher sorts of labor is exceedingly distasteful. Foreign influence is to be credited entirely with the engagement of women in the labor of the fields, foundries, docks, machine shops, and other heavy manual toil. The American sees feminine independence as an ideal only when it is along beautiful lines. That a woman should have equal part with men in the heavy labors of the world is entirely foreign to American sentiment.

In business circles in the United States women are beginning to be looked upon as superior to men in all subordinate positions where accuracy and strict devotion to duty are the principal elements required, but they have not yet demonstrated their equality with men in independent enterprise. They have for many years been filling all office positions satisfactorily, but important stock operators amongst women are comparatively few, and, with the exception of a few unusual women, who are probably to be numbered on the fingers of one hand, there are no members of the fair sex who play any important part in the affairs of the great corporations which now dominate the business life of America. The

business women of the United States are either in the salaried clerk class or that of the small proprietor.

Mining and other enterprises of the West should, however, be excepted from this generalization. Women have proved decidedly successful in mining. The woman miner of the West is looked upon with deference by the important men in her section of the country. There is a superstition that women possess powers of divination for locating mines, and many instances are recited to prove this theory. As a rule the women mine owners and operators have drifted into this work through natural circumstances. They have been the wives or sisters of miners or have been brought up in mining centres. In many cases the wives of miners have taken up claims abandoned by the husband after the men have become ill or discouraged. A story is told of two stenographers from Boston, who, while enjoying a vacation in a mining country, brought an interest in an old claim from a poverty-stricken miner. With the savings of their earnings they began operating, and the mine is now one of the best producers of low-grade ore in that section of Colorado. Women are among the best authorities on ore in Colorado. They go down the shafts, superintend the blasting, and even repair machinery.

In Arizona a very well paying mine was discovered some years ago by a woman who went to that part of the country from the East with her sick husband. The woman was led to the mine by an Indian. She cherished that immediate and instinctive belief in its value which is believed by many persons to be an unerring sign of feminine divination. Although the mine had been abandoned as absolutely worthless, she persisted in operating it, and before a year had secured \$50,000 in cash payment for the ore and a life interest in its very comfortable output. In Idaho a woman realized \$250,000 in the first five months of her operation of a mine which had been abandoned by men. In Santa Fe, New Mexico, a woman took up a mine abandoned by her husband and sold it after she had worked it for a year for a very large sum. In almost every instance where women have worked mines successfully the mines have been previously worked and abandoned by men. With these courageous members of their sex are to be ranked the women cattle-farmers, sheep-farmers, and dairy-farmers, who have in numbers of instances won success in the south and south-west. Dairy-farming in South America is also a field which has been entered successfully by American women, and one towards which women of other countries might well turn their attention.

In the eastern section of the United States the enterprises of women

are on a smaller scale. In the vicinity of cities there has sprung up a species of fancy farming that has found much favor among women. It embraces the cultivation of especially perfect vegetables, fruits, and flowers for an exclusive and expensive market where quality instead of quantity determines the gains of those who cater to it. Salad farms, poultry farms, violet farms, gold-fish farms, catteries, etc., are among the most delicately attractive of these specialized businesses.

Akin to these projects for supplying the extra fine luxuries of Dame Nature, there is growing up in the cities themselves a large and important branch of trade, in which women have a good part, for supplying to the same favored class manufactured luxuries which cannot be obtained by the masses of the population. There seems to be in this a suggestion that women are inclined to approach wealth through small, safe means, to cater rather to the taste for the precious, peculiar individual thing that so intensely characterizes a civilization of riches than to the demand of the masses for indiscriminate quantities. In the large cities women in trade for themselves are reaching out principally towards the establishing of exclusive shops, small, unique and expensive, for the sale of a limited number of perfect articles, whether it be in the line of food, flowers, clothes, furniture, jewelry, or what not. The manufacture by hand of jewelry, silverware, etc., interior decorating, book-binding, and kindred arts vowed to the embellishment of material things seem especially to attract the interest of women who flock to the great cities of America. Women seem not to be either so brutally commercial as one-half of the masculine world, which in the manufacture of articles made to sell absolutely excludes all reference to the dictates of taste, or so truly artistic as the other half of masculinity, which refuses to adapt art to mundane uses.

For the same reason that heavy labor for women has not hitherto been looked upon with favor by the men of the United States, the office of barmaid is practically unknown in America. Much distaste is felt for the employment of a woman in serving intoxicants, but there are women who act as coachmen, grooms to private families, and barbers to the public. Women dentists are popular. Women physicians are recognized as very much needed in the treatment of women's and children's illnesses. There are numbers of women clergymen, mostly of the Unitarian, Seventh Day Adventist, and Congregational Churches, not forgetting, of course, the Christian Scientist. New York has the advantage of one women's hotel, where the bell-boy has been abolished and girl pages established in his stead.

Wiles and Ways of the Counterfeiter.

(NEW YORK SUNDAY TIMES.)

Just how the counterfeiter fools the public is little known. In this article we are let in to some of his methods, through the kindness of U. S. Treasury Counterfeit Detector John Holler. The story he tells of how the trick is done is full of interest.

WHEN Uncle Sam calls in a new issue of gold or silver certificates, as was the recent case of the Treasury Department calling in an entire new issue of hundred-dollar silver certificates, he pays a silent tribute to the wiles and ways of the counterfeiter. It amounts to an occasional confession on his part that the counterfeiter is nearly as clever as himself, and that it is almost impossible to mint or print a coin or certificate that cannot be copied well enough to insure of extensive circulation before detection. For each \$100,000 of genuine paper money in circulation there is one counterfeit dollar, and for each \$100,000 in coin there is approximately \$3 playing hide-and-seek with us, says United States Treasury Counterfeit Detector John Holler, the most expert member of his profession in this country.

His offices on Bowling Green contain probably the best collection of bogus bank notes possessed by any single individual living. Prior to 1891 there were several extensive collections, but Uncle Sam stepped in then and made it illegal for any one to have counterfeit money on hand without permission of the Secretary of the Treasury. His complete aggregation of notes represent nearly \$20,000, but he is allowed to keep only \$900 worth here, the rest being deposited in the Treasury Department at Washington. Among other curios in his collection is a new counterfeit \$100 gold certificate, which made its appearance at the Gravesend race track about a year ago.

On that occasion a considerable number of hundred-dollar counterfeit certificates had turned up in the metropolitan banks. They were fairly well executed, but there were enough discrepancies to make them distinguishable to keen observers. As many of these notes are no doubt wandering about the country, a description of them will be interesting. According to Mr. Holler, they bear the numbers C424333 and C324333, and doubtless other numbers. The color of these numbers is good, but not the clear ultramarine blue of the genuine. The lathework surrounding the denomination 100 in the northeast corner of the note is flat, broken and slightly blurred. The lettering is excellent, except the imprint under the signatures of Register J. W. Lyons and Treasurer Ellis H. Roberts, which is poor. The hue of the word "Gold" on the face of

the note is faulty, and the color of the back, instead of the brownish yellow of the genuine, is a pale salmon shade. The fibre of the bogus paper is a clever imitation in pen-and-ink scratches, the absence of the silk fibre being noticeable when the note is held up to the light.

Inquiry developed that several confederates had victimized the Gravesend bookmakers on the Saturday preceding the discovery, the bogus notes being passed in wagers of \$50 each each, the bookmakers handing out \$50 in good money as change each time.

Of course, the counterfeits were mostly distributed among bettors, who in turn innocently passed them on at Gravesend, Coney Island, and Brighton and Manhattan Beaches, as well as in New York. The discovery being made on a Monday, Robert A. Pinkerton sent for Mr. Hoiler, who at once picked out the counterfeits from a number of genuine notes. Three weeks later the Secret Service arrested Marcus Crahan and a confederate at the Delmar truck, in St. Louis, and confiscated seventy-one hundred-dollar bills found on Crahan's person and in his trunk.

Chief Wilkie obtained a confession from Crahan to the effect that he had made and had passed the Gravesend counterfeits, besides several counterfeit fifty and one-thousand-dollar bills. He divulged the hiding place of 150 bogus one-hundred-dollar bills checked in a satchel at the Union Station in St. Louis. Exactly one month from the day the bogus notes appeared at Gravesend, Crahan began serving a fifteen-year term in the Federal prison at Atlanta.

Aged about 35, he had no criminal record, and had lived for many years in Syracuse and Providence. At one time he was employed by a Providence daily paper, and had subsequently prospered in business for himself.

It would appear that these notes, as well as the even more familiar one-hundred-dollar silver certificates, were accepted without hesitation when presented. No one questioned them until a few of them were deposited in a New York bank, where their peculiar coloring, contrasted with genuine notes, attracted attention. In one of these notes in the Hoiler archives, the wonderful workmanship, the quality of the paper, and the fine subtle threading give the bill a genuine appearance that is startling.

Speaking of the clever deception, Mr. Hoiler said it was often astonishing how queer a note may look and still be genuine. For example, he continued, a note that inadvertently goes to the cleaner in a coat or vest and is given a chemical bath often acquires peculiarities that might deceive the average person into thinking it "queer" money. On the other hand, it is quite as astonishing how good a bad bill may appear.

Contents of Leading Magazines.

OCTOBER NUMBERS.

HARPER'S MAGAZINE.

The Slave Trade of To-day. By H. W. Nevins.
Breeding Beneficial Insects. By H. A. Crafts.

THE CENTURY.

Economy in Food. By R. H. Chittenden.

ATLANTIC MONTHLY.

President Roosevelt's Railway Policy. By W. Z. Ripley.
The Golden Rule. By W. A. White.

McCLURE'S.

Pioneer Transportation in America. By C. F. Lummis.
Kansas and the Standard Oil Company. By Ida M. Tarbell.

WORLD'S WORK.

The End Story of Industrial Trusts.
Our Financial Oligarchy. By S. R. Pratt.
The Automobile in Industry. By H. Oserich.
The Railroads and the Square Deal. By Rowland Thomas.
Great Changes in the Railroad Problem. By W. Z. Ripley.
The Federal Regulation of Insurance. By J. F. Dryden.

SMITH'S MAGAZINE.

The Public and the Post-office. By A. F. and T. B. Collins.

HARPER'S BAZAR.

Rugs—What to Buy and How. By Martha Cutler.

APPLETON'S BOOKLOVERS.

The Farms that Feed the Nation. By David Rankin.
The Promise and Problems of Reciprocity. By Harold Bolec.

COSMOPOLITAN.

The Redoubts of Graft and How to Take Them. By Chas. Ferguson.
The Real John Weaver. By W. R. Stewart.
Paul Morton—Human Dynamo. By E. Lefevre.
Creating Fashions in Dress. By Elizabeth McCreddith.

PEARSON'S.

Lumbering the Giant Trees. By Waldeu Fawcett.

DELINEATOR.

Lean Milk: How Produced and Marketed. By Mary H. Abel.

EVERYBODY'S

The Artist Dressmakers of Paris. By E. H. Brainard.
 Pressed Finance. By T. W. Lawson.

TECHNICAL WORLD

How Great Cities Fight Darkness. By J. Herbert Welch.
 Paper and Its Manufacture. By W. R. Stewart

SUCCESS.

A Day With Thomas F. Ryan. By H. H. Lewis.
 Business Letter-writing as a Profession. By Sherwin Cody.

METROPOLITAN.

The Romance of the Trees. By J. W. Guthrie.

NORTH AMERICAN.

How to Extend Commerce in the Far East. By J. W. Jenks.
 Canada and the Joint High Commission. By L. J. Burpee.
 The Public and the Coal Conflict. By H. E. Root.

ERA.

Should Government Control Railroads? By J. M. Mason.
 The Despotism of Combined Millions.
 Greater Industries of America. By Herbert Churchill.

INTERNATIONAL QUARTERLY.

Public Ownership in New York. By E. B. Whitney.
 The Chicago Traction Question. By C. S. Darrow.
 Lighting and Water Service in New York. By R. G. Munroe.
 The Concentration of Financial Power. By C. A. Conant.
 Business Methods in China. By J. W. Jenks.
 The Next Step in Life Insurance. By Ernest Howard.

THE FALL MALL MAGAZINE

The Colonial Secretary at Home. By E. A. Keddell.
 London, the Cinderella of the Cities. By John Burns, M.P.

WORLD TO-DAY.

Harnessing Sierra Streams. By Hamilton Wright.
 The Amusements of the London Poor. By Percy Alden.

CANADIAN MAGAZINE.

Sir Gilbert Parker, M.P. By John A. Cooper.
 Journalism and Public Life in Canada. By J. S. Willison.
 The New Provinces. By F. W. Hunt.

FORUM.

Life Insurance Methods. By Louis Windmuller.

AMERICAN MONTHLY REVIEW OF REVIEWS.

The Utah Land Opening.
 Mexican Water-power Development. By T. C. Martin.

President Diaz on Transcontinental Trade. By Henry Stead.
 The Future of British India. By Sir Henry Cotton.
 American Life Insurance on Trial. By Walter Wellman.

POLITICAL SCIENCE QUARTERLY.

The Cost of Life Insurance. By Allan H. Willett.
 Pending Problems in Public Finance. By E. R. A. Seligman.
 British Administration in Egypt. By Sidney Peel.

CHAMBERS'S JOURNAL.

Lucca: Land of Olive Oil. By Lieut.-Col. A. Haggard.
 Dangerous Derelicts. By W. Rutherford.

CONTEMPORARY REVIEW.

Belgium and the Congo. By F. D. Morel.
 Is the Government Indispensable? By E. T. Cook.

CORNHILL.

Some Diversions of an Industrial Town. By Mrs. Birchenough.

EMPIRE REVIEW.

Supply of Food and Raw Material in Time of War. By Sir Charles Broce.

The North-West of Canada: Mavor's Report. By Kinloch Cooke.

ENGLISH ILLUSTRATED MAGAZINE.

Old English Shops. By J. Hutchings.
 The Victoria Falls of the Zambesi. By Emil Loch

FORTNIGHTLY REVIEW.

The Legitimate Expansion of Germany. By Sir H. H. Johnston.
 A Traffic Board for London. By J. B. Fifth.

GEOGRAPHICAL JOURNAL

A Journey Through Northern Newfoundland. By H. C. Thomson.

MONTHLY REVIEW.

Mr. Chamberlain's Proposals and Canada. By J. S. Ewart.

NATIONAL REVIEW.

The Revenue Aspects of Fiscal Reform. By Sir Chas. Follett

NINETEENTH CENTURY AND AFTER.

The Traffic of London. By Capt. G. S. E. Swinton.
 The Recent Increase in Sunday Trading. By Lord Avebury.

WORLD'S WORK AND PLAY.

What is to be Done With Our Canals? By Geo. Turbushell.
 London to Liverpool by Canal. By J. L. C. Booth.
 Good Living on Five Shillings a Week. By N. G. Bacon.

City Circulation, Its Relation to Local Advertising.

Winnipeg, Man., Oct. 2, 1905.—The Manitoba Free Press of Winnipeg about a month ago took possession of its new fire-proof building, which is the largest structure in Canada wholly devoted to the newspaper and publishing business, and which is undoubtedly the best equipped, most handsomely appointed and most modern newspaper building in the Dominion. The Free Press, unlike the majority of metropolitan papers, controls its own system of delivery to subscribers in the city, and it occurred to your correspondent that the manner in which the Free Press has provided accommodation to handle this branch of its business, the methods adopted and the results achieved, would form an interesting article for publication in the Business Magazine, and might perhaps prove helpful to some of the publishers who handle their circulation on the same principle as the Free Press.

The equipment and organization for the handling of its city circulation by the Free Press is most complete. For the boys two rooms have been provided in the new building, one for the carriers and one for the newsboys who sell by the copy on the streets. These rooms are large, well lighted and ventilated, the floors and ceilings being of solid concrete and the partitions of terra cotta brick, overlaid with concrete, the general appearance going to make the apartments suggestive of prison cells on a large scale, the resemblance being enhanced by the heavy wire mesh with which the windows and doors and electric light globes are protected. The concrete floors fall to the centre to an outlet drain, and the walls and ceilings being painted with a water-proof preparation, the hose can be turned on from a branch pipe and the rooms thoroughly cleaned.

In the immediate rear of the newsboys' rooms and separated by half-doors, provided with counters, is the office of the superintendent and his assistants, who have charge of the 140 carrier lads and the small army of newsboys. A mechanical carrier will deliver the papers direct from the presses to this office. A special department in the main office above takes care of the bookkeeping, collections, etc., etc. The names of the city subscribers for bookkeeping, collecting and canvassing purposes are divided into routes arranged, not alphabetically, but by geographical divisions, the names being filed on specially printed cards on the card index system. One corps of clerks is constantly engaged in making out

subscription accounts, while another records the payments made. To handle nearly 13,000 accounts, organization and system are essential, and here they are brought as near perfection as the constantly changing conditions will permit. Collections are handled by a capable staff, who report to a chief, the arrangement of the routes being so planned that twice every month each route is covered, and so thoroughly is the work done that 90 per cent. of the subscriptions are close paid. The delivery of the paper requires the services of a staff, as already mentioned, of 140 boys, who deliver daily 12,185 papers. This does not include street sales nor newsdealers' papers, which added, bring the daily distribution in the city to 15,917 papers. The carriers are divided into eight separate forces. The central squad, which is the largest, obtain their papers at the main office. The other seven detachments report and receive their papers at conveniently located branch depots, to which papers are sent post haste by horse and rig. By this system the entire city is covered in a minimum space of time, and in such a way that the outlying sections are supplied almost as quickly as those nearer the heart of the city. Call boys are always on hand to hurry tardy carriers of the early morning edition.

The possession of its own carrier system enables the Free Press to know just where every paper goes, to learn easily and quickly the reason why a reader drops the paper. By the geographical arrangement of the routes the residences at which the paper is not taken are located without difficulty, enabling the circulation promotion department to concentrate and intelligently direct its efforts. The carrier boys, by the reward of a commission, are encouraged to seek for, and secure, new subscribers. Properly handled and directed by an able and judicious circulation manager, it can be readily seen what a formidable canvassing force can be made from 140 intelligent lads, and that the Free Press realizes the importance of properly employing and directing this machinery is shown by the fact that not many hours elapse after a new house has been occupied before one of the Free Press carrier lads is hot-foot after a new order.

After all, however, what a newspaper publisher is desirous of learning is what the Free Press has accomplished by its delivery service; has it paid the paper, what is its present circulation, what relation does the circulation bear to, say, the number of houses in the city, is the circulation increasing, and what effect has the policy had on local advertising? I can best answer this by contrasting and comparing the city circulation of the Free Press with the number of water-takers and the number of houses in the city. According to figures submitted by the City Engineer, there were on August 1st 9,000 water consumers registered at the City

Hall. The Assessment Commissioner reported on the same date that a careful canvass of the city showed that there were 13,864 dwelling houses, completed or in course of construction. On this date the circulation of the Free Press in the city was 15,917, distributed as follows:-

Delivered to residences in city by carriers.....	12,185
By city newsdealers.....	1,665
By city street sales.....	1,869
Counter sales and files.....	908
	<hr/> 15,917

Now, in regard to the question of advertising. The Free Press is acknowledged to carry more general display and classified advertising than any other daily newspaper in the Dominion of Canada, and in regard to local advertising, while its rates are from two to three times as high as its contemporaries in the city, it outclasses them in volume of advertising carried even in a greater ratio. Its total volume of general display and classified advertising for July, 1906, amounted to 2,438 1-4 columns, equal to 731,475 space lines, or an average of 36 3-5 columns per day. During the month of August, which from an advertising standpoint is generally considered one of the duldest of the whole year, the Free Press carried 2,235 1-2 columns, or 670,650 lines, an average of 82 3-4 columns per day.



THE TELEPHONE

Is a companion, friend and servant combined.
Invaluable for convenience in the household.

LONG DISTANCE TELEPHONE SERVICE

Has no equal for the facility it affords in business life. Full particulars as to rates and service at the nearest office of

THE BELL TELEPHONE COMPANY OF CANADA

Keep Your Eye on the

CANADIAN CHURCHMAN

Advertisers will find it hard to secure a religious paper more profitable as an advertising medium. It is the organ of the Church of England in Canada, covering the entire Anglican field, and which is composed of the most influential and money-paying people in Canada. The text of the shrewdest advertisers gives it a first place among the religious weeklies of the Dominion. Rates, on application. Our representative will, if desired, make personal call.

Office of Publication: 36 Toronto St., Toronto

Read the
MacLean
Trade
Newspapers

*Littlejohn & Vaughan, Limited,
Electrotypers & Lithographers,
Truth Building,
79, Adelaide Street West,
Toronto.*

THE HAMILTON SPECTATOR

SWORN CIRCULATION 1904

DAILY

10,568

SEMI-WEEKLY

7,301

THE DAILY SPECTATOR is the only local paper used by all the Departmental Stores. It leads in classified advertising. It leads in Real Estate advertising, and it leads in general advertising. The reason for its absolute leadership in its field is because it is the only local paper giving sworn detailed statements of circulation, and because its patrons have proven its value and are amply satisfied with results.

THE WEEKLY SPECTATOR is a twice-a-week visitor in the homes of wealthy farmers, a class who enjoy more comforts, more luxuries and even a greater share of prosperity than any similar class in any part of Canada. To cover Hamilton and the farming community surrounding it, the Daily and Semi-Weekly Spectator are mediums absolutely necessary to the general advertiser.

Established 1874

The Sentinel

The only paper in Canada printed in the interests of Change and Pro-
fession Organizations.
It covers a special field of special
value.

The Sentinel Publishing Co.
7th St. 17th
TORONTO Limited

To advertise your business
HAVE CIRCULARS DISTRIBUTED
The Dominion Distributing Co.
Limited

Are the most reliable for the work
Newspapers, Circulars and Periodicals
also Messenger Service at all hours
Phone 2606 34 Adelaide St. West

Rural Western Canada

America's Most Prosperous
Agricultural Field

Over 1,200 miles in length by 400 in
breadth, or nearly 330,000,000 acres in
area.

Just Opening to the World.
Acreage Under Cultivation—

Wheat	2,764,892	acres
Oats	1,830,220	"
Barley	685,634	"

Total 5,099,750 acres
or less than 2% of the whole territory.

Yield of Wheat for the
Last Five Years—

1901	65,310,892	bushels
1902	67,431,117	"
1903	66,198,027	"
1904	65,281,037	"
1905	82,000,000	"

(Estimated)

Immigration—

Year	Ending United	Other	Total
June 30.	States	British	free
1904	17,008	11,899	28,907
1902	21,672	17,259	38,931
1903	17,780	11,787	29,567
1901	22,172	20,353	42,525
1900	23,563	20,723	44,286

Crop reports show that the grain
has now all been cut and the greater por-
tion of it threshed or stacked, thus en-
suring it against any possibility of dam-
age from rain or climatic conditions.

Care of Wheat
Inspected at Winnipeg—

To September 27, 1905—4,430 cars or
4,511,000 bushels.
Up to same date, 1904—3,672 cars or
3,750,000 bushels.

Making an increase for 1905 over
1904 of 878,000 or 3,586,000 bushels.
Of this quantity over 75% has graded
other No. 1 Hard, or No. 1 and 2 North-
ers, bringing the highest prices.

This means that a vast quantity of
ready money is now pouring into the
farmer's hands, and that they will have a
position to buy many articles previously
considered luxuries.

Reach this class by advertising in

**The Weekly
Free Press
Winnipeg, Can.,**

every copy of which goes
into a farmer's home.
Sworn average circulation for August,
1905, 15,670.

The Interesting
Story of . . .

A GREAT TRADE NEWSPAPER PUBLISHING COMPANY

It is safe to say that there is no business man in the Dominion of Canada to day who does not know of the MacLean Publishing Company, either directly or through one of its numerous trade newspapers. The history of the Company is the history of trade paper publishing in Canada. Ever since the President of the Company, Lieut. Col. J. B. MacLean, founded it in 1885, the Company has been foremost in its field, and its progress from a small beginning to a splendid maturity makes a story well worth reading.

At the present time the Company publishes six distinctly trade newspapers, covering six distinct fields. These embrace the most important trades in the country, with the result that the combined circulation of the six covers almost the entire business community of the Dominion.

The Company operates the most complete publishing plant in the Dominion—the composition, press work, binding and mailing all being done on its own premises.

The combined publications of the Company, calculated on a daily basis, exceed in size the largest daily published in Canada. They contain more original and exclusive news of commercial interest than any other paper, and they have a larger foreign circulation. In fact, all over the civilized world the MacLean Trade Newspapers are finding an ever-increasing constituency of attentive readers.

It pays to get the
best.

We print
Catalogues, Booklets,
Circulars and all
kinds of Advertising
Literature.

The Mail Job Printing Co.
75 York Street Limited
Toronto

Phone, Main 8-130-135
All long distance
Richard Sordham
Manager

We aim to give the
best.

Two Important Weeklies

**The
Canadian Grocer**
Every Friday

**The
Hardware and Metal Merchant**
Every Saturday

All the News Every Week of the Year.

THE CANADIAN GROCER in its familiar green cover is to be seen in every grocery establishment, wholesale and retail, in the Dominion. Its coming is awaited with anticipation. It is received with pleasure. It is read with interest.

Travelers to all parts of the world will find **THE CANADIAN GROCER** doing missionary work for Canadian trade in every commercial center. It is the most widely circulated Canadian paper in foreign parts.

The great aim of **THE CANADIAN GROCER** is to give all the news about Canadian food products that can be gathered. It has a corps of live correspondents located in the leading trade centres of Canada, who send in weekly market reports. It has a well-qualified editorial staff to deal with important trade questions. It takes its stand as the apostle of the forward movement in the food product trade and sets its foot down on everything that hinders progress.

THE HARDWARE AND METAL MERCHANTS' yellow cover is just as familiar in its field as its colleague's green cover, and its advent is quite as warmly marked. Like **THE GROCER** it prints all the news in the hardware and metal trades that can be brought together by its staff of able correspondents and editors. It is recognized as an authority on markets. It is known as the champion of fair dealing. It circulates in all parts of the world.

THE MACLEAN PUBLISHING CO., LIMITED
MONTREAL TORONTO WINNIPEG

Three Notable Monthlies

In the list of publications of the MacLean Publishing Company are three long established and flourishing monthlies—**THE DRY GOODS REVIEW** AND **MEN'S FURNISHER**, **THE BOOKSELLER AND STATIONER** AND **THE PRINTER AND PUBLISHER**.

The Dry Goods Review makes an imposing appearance with its handsome cover, its numerous illustrations and its great bulk. This publication stands unrivalled in its field. It has a staff of experts and special correspondents, who supply exclusive information. The best artists are employed to prepare cover designs, and the greatest care is taken to produce a most up-to-date paper. The numbers range in extent from 150 to 300 pages.

The Bookseller and Stationer is the recognized organ of the book, stationery and fancy goods trades of Canada. This publication celebrated its twenty-first anniversary last August, and to mark the event issued an elaborate "Coming of Age" number, profusely illustrated and printed on heavy coated stock. **THE BOOKSELLER AND STATIONER** keeps in close touch with the publishers and manufacturing stationers, and is able each month to supply its readers with exclusive information.

The Printer and Publisher is likewise a long-established trade publication, with a record of steady growth. It is the organ of The Canadian Press Association and several other newspaper organizations, and is also the mouthpiece of the various Employing Printers' Associations throughout Canada. Its technical articles are of much value to the printer, while its news columns supply information of a valuable and readable character. **THE PRINTER AND PUBLISHER** is well printed on heavy stock, and a special color cover is prepared for each issue.

THE MACLEAN PUBLISHING CO., LIMITED
MONTREAL TORONTO WINNIPEG

The Youngest of the Stalwart Six

CANADIAN MACHINERY AND MANUFACTURING NEWS

¶ Less than a year old it already occupies a position of authority in Machinery and Power circles in Canada. It is the only machinery paper in the country and covers the field in a thoroughly practical and comprehensive manner. The need of such a paper has been well demonstrated by the phenomenal success attending the efforts of the publishers since the appearance of the first issue. Its pages are alive with high-class articles written by experts, as well as the latest and best news of the trade. It is intended to make this one of the leading mechanical and power papers in the world, and from the rate at which progress has been made since the first issue it is expected that this aim will soon be realized.

THE McLEAN PUBLISHING CO., Limited
Montreal Toronto Winnipeg

CAPITAL PAID UP, - - \$1,000,000
RESERVE FUND, - - 1,000,000

THE METROPOLITAN BANK.

DIRECTORS

R. H. WARDEN, D.D., President S. J. MOORE, Esq., Vice-President
D. E. THOMSON, Esq., K.C. His Honor W. MORTIMER CLARK, K.C.
THOS. BRADSHAW, Esq. JOHN FIREBROOK, Esq.

HEAD OFFICE, - TORONTO.

W. D. ROSS, General Manager

GENERAL
BANKING
BUSINESS
TRANSACTION

SAVINGS DEPARTMENT

at all branches.

ACCOUNTS SOLICITED

Drafts Bought and Sold
Letters of Credit Issued

Estab. 1860

British American Business College

We train

- 1st First-class stenographers.
- 2nd Up-to-date bookkeepers.
- 3rd The best pen-holders for business calligraphy.
- 4th Twentieth Century office men.

Our Students Learn

- 1st Groups of Pitman Shorthand.
- 2nd Double Entry and Joint Stock Book-keeping.
- 3rd Modern Legible Writing.
- 4th The proper use of English for business purposes.

Our Graduates

- 1st Secure the cream of the situation.
- 2nd Forge rapidly to the front.
- 3rd Are among the best known business men in Canada, and always employ our stenographers and bookkeepers.

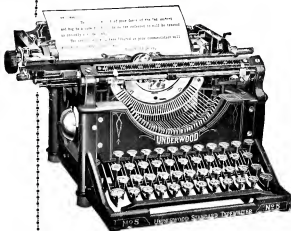
250 10,000 graduates. 100 asked for last year as office assistants.

R. H. Farquharson, B. A.
Principal

Cor. McGill and Yonge Sts., TORONTO



THE UNDERWOOD



The Writing-in-Sight Typewriter

Will do your work 25% to 50% faster than any other writing machine. Highest award, "Grand Prize," St. Louis Exposition, 1904.

UNITED TYPEWRITER CO., LIMITED

7 Adelaide Street East 99 St. Francis Xavier Street,

TORONTO and at MONTREAL

HAMILTON LONDON OTTAWA QUEBEC ST. JOHN, N.B.

THE BEST way of advertising is in a live up-to-date newspaper.

Such a paper as

The Daily and Semi-weekly cover a large territory. . . .

Immediate, sure and profitable **RESULTS.** . . .

We should like to do your printing.

We have one of the most complete printing establishments in Canada.

THE TIMES

TIMES PRINTING COMPANY, Limited

HAMILTON, Ontario.

27,000 COPIES WEEKLY.

EAST AND WEST

ILLUSTRATED

A PAPER FOR YOUNG CANADIANS

The title—**EAST and WEST**—is significant of the broad field covered. This popular Canadian Weekly, illustrated, published in the interests of the young men and young women of Canada, has a **Circulation of 27,000 Copies** weekly, and reaches literally from the Atlantic to the Pacific. A paper that reaches one of the best-buying constituencies in Canada.

EAST and WEST brings results to the Advertiser

R. DOUGLAS FRASER, Editor and Business Manager

Confederation Life Bldg., - TORONTO

Canada's Financial Daily Newspaper

The Toronto World

Is recognized throughout the Dominion of Canada as the leading financial daily newspaper. Its circulation extends from Vancouver to Halifax, and its opinions on financial subjects are eagerly sought for.

Canada's Leading Banks

Loan Companies, etc., all make their business announcements in the columns of the **WORLD**. It reaches the right class of people.

THE WORLD NEWSPAPER CO., LIMITED
TORONTO, Canada

H. E. SMALLPEICE, Manager Advertising Department.

Independent and Original

The Hamilton Herald

LEADS

In **News** and **Circulation**

Is the

Recognized Want Medium

and gives **Bigger and Better**

RESULTS

than all other Hamilton Mediums combined.

WHY?

Because in Hamilton and Niagara district nearly everyone who can read English reads the **HERALD**. If you are not in the **Herald** you are not in the homes of Hamilton.

No Other Paper

will give you the same satisfactory service in bringing to your office, factory, warerooms or store good, paying, substantial business, as the

Mail and Empire

Quality and quantity combine in the best sense in bringing results commensurate with the money spent. You "make good" your expenditure in this great Canadian Daily. In your calculation for Fall and Winter business the **Mail and Empire** should be included in your appropriation.

TORONTO, - Canada

Grand Trunk Railway

During the past few years millions of dollars have been spent in double-tracking, levelling grades, building bridges and perfecting the road-bed, and the degree of excellence obtained has enabled the Company to operate a service that for

Speed, Comfort and Punctuality

is unsurpassed. The rolling stock and train equipment are in keeping with this high standard, and the wide vestibule coaches with high-backed seats and smoking compartments, the handsome electric-lighted parlor, cafe parlor and dining cars, and the modern drawing-room sleeping cars insure not only a fast but a comfortable trip by the

DOUBLE TRACK ROUTE